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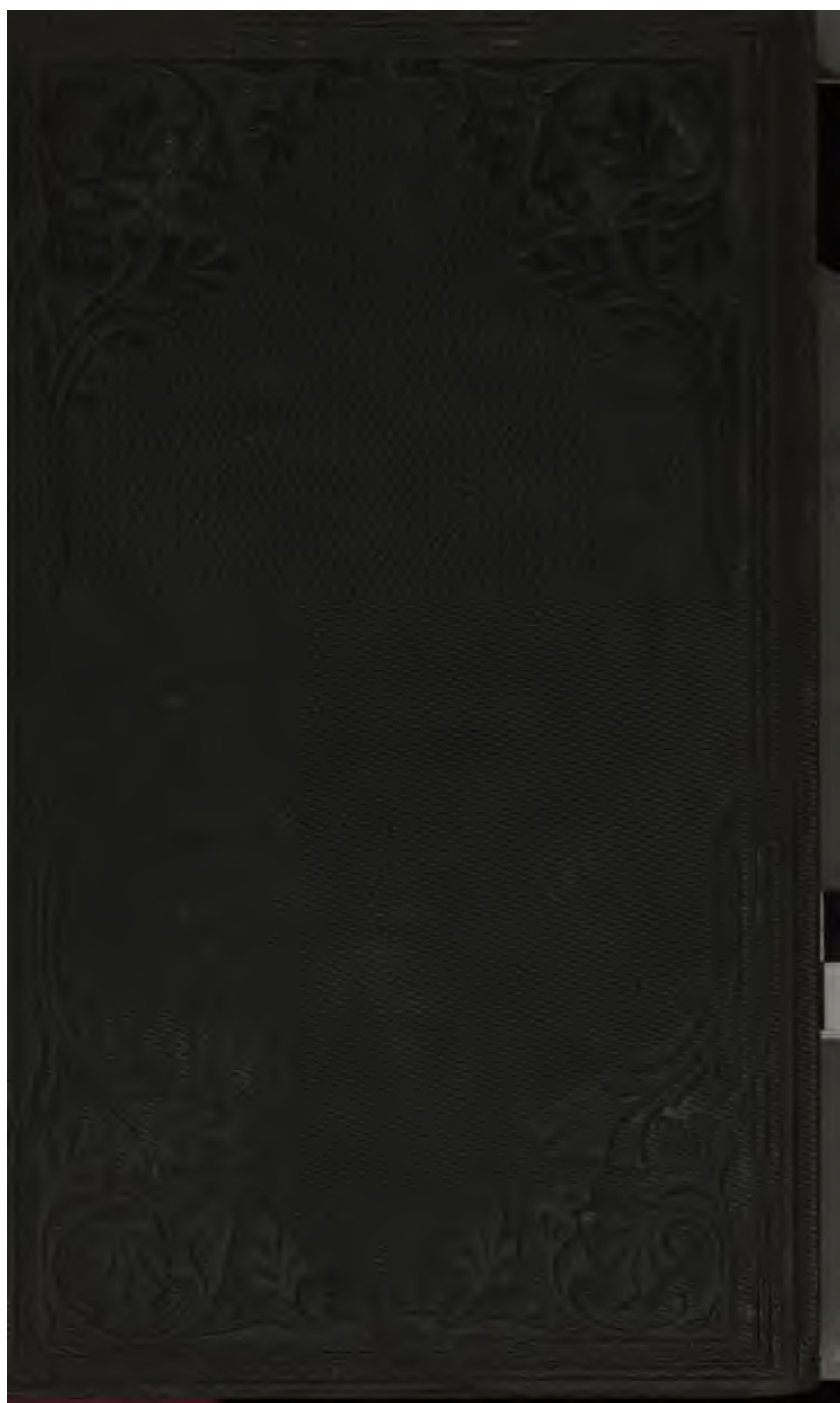
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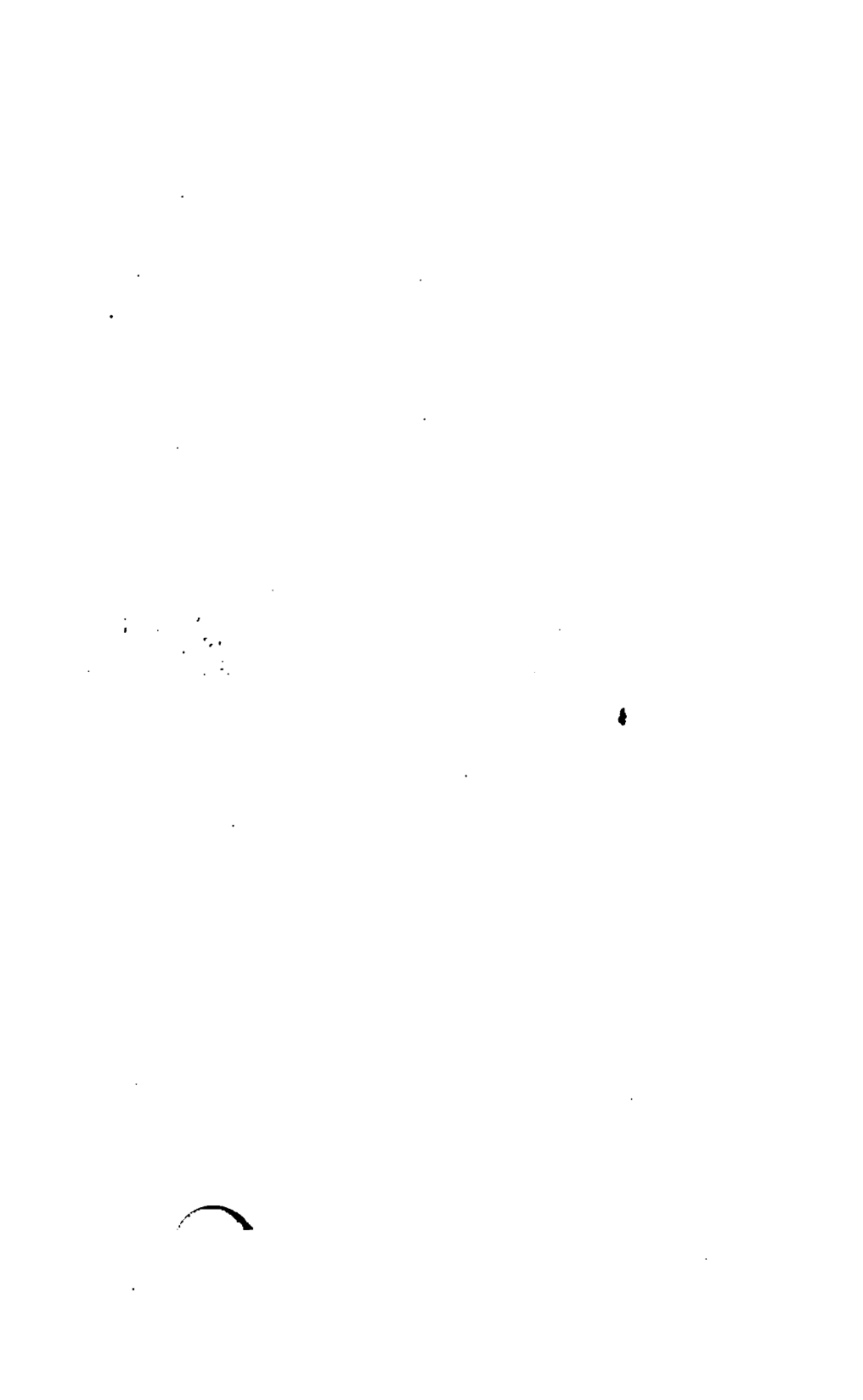
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NATURAL ELEMENTS
OF
POLITICAL ECONOMY.

BY

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"The most profitable and philosophical speculations of Political Economy are, however, of a different kind : they are those which are employed, not in reasoning from principles, but to them."—WHEWELL, *Trans. Camb. Phil. Soc.*, vol. iv. p. 197.

"The time I trust will come, perhaps within the lives of some of us, when the outline of this science will be clearly made out and generally recognised. . . . I scarcely need repeat how far this is from being the case at present."

N. W. SENIOR, *Lectures on Political Economy*, p. 52.

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P R E F A C E.

THE object of this treatise may, perhaps, be best explained by pointing to a passage in the history of philosophy, which, frequently as it has been referred to, has always proved a trustworthy exponent of the principles of scientific discovery.

When the astronomers of the Ptolemaic school undertook to explain the courses of the heavenly bodies, they taught "that the real motions of such beautiful and divine objects must necessarily be perfectly regular, and go on in a manner as agreeable to the imagination as the objects themselves are to the senses." They accordingly ascribed to each of these intricate courses a geometrical form, which they conceived to be the most perfect—a method admirably simple, easily understood, and vitiated only by this defect, that

it does not faithfully represent Nature. "Having settled it in their own minds that a circle is the most perfect of figures, they concluded of course that the movements of the heavenly bodies must all be performed in exact circles and with uniform notions; and when the plainest observation demonstrated the contrary, instead of doubting the principle, they saw no better way of getting out of the difficulty than by having recourse to endless combinations of circular motions to preserve their ideal perfection."*

The science of astronomy, at this stage of its growth, was in much the same state as Political-economy now is. The art of "confession and avoidance" has indeed advanced since the days of Hipparchus, and the doubting pupil is now dismissed, not merely instructed in the use of verbal epicycles, but with the assurance that the principles of Political-economy which he has been taught, if not true, *have a tendency* to be true: that if found imperfect in the *abstract*, they are perfect in the *concrete*, and that an allowance must always be

* Herschel's Natural Philosophy, p. 97.

made for the influence of *disturbing causes*. But these are considerations which can never establish an unproved proposition, and ought no more to induce a belief in such dogmas as the definitions of value,* advanced in our days by the conflicting schools which profess to explain its laws, than in the principles of Ptolemaic astronomy.

It is not to be denied that the propounders of any system of philosophy, however radically unsound, may render important services to the advance of knowledge by exhibiting approximations to truth at periods when truth itself is yet below the horizon, and by presenting these in a shape adapted to excite further inquiry, and to bring into early existence arts

* "Le principe de la valeur est pour Smith dans la matérialité et la durée, pour Say dans l'utilité, pour Ricardo dans le travail, pour Senior dans la rareté, pour Storch dans le jugement," &c.—*Harmonies Economiques, par F. Bastiat*, p. 120. ; to which may be added this author's own definition (p. 118.) — "La valeur, c'est le rapport de deux services échangés;" and that of J. S. Mill — "The value, or exchange value, of a thing, its general power of purchasing." — *Principles of Political Economy*, vol. i., p. 516.

See also *Whateley's Logic (Appendix), Ambiguous Terms*,—Value, Wealth, Labour, &c.

which might otherwise have been unknown until later epochs. But these services can endure but for a time, and may, and probably will, eventually be turned to injuries: as the workings of Nature become daily better understood, there must become daily more apparent the defects of every school, which offers as an exact delineation that which is but a rude sketch; containing seeds of decay which ripen under every new discovery as it originally asserted more than it could prove, it must in the end be content to receive less praise perhaps than it deserves. The decline of every such school will naturally be characterized by attempts to reconcile events with the language in which its propositions were originally enunciated, and too often by efforts, not to find expressions to represent observed *facts*, but to discover facts that may appear to be represented by received *expressions*; and, when the truth has become too obvious to be misrepresented, by the feuds of contending sects, resulting in a war of words*, with a copious expenditure on verbal subtilties of

* Malthus' Definitions on Political Economy. De Quincey's Logic of Political Economy.

labour, and ingenuity, which might have been profitably employed in observing and analyzing natural phenomena.

We may venture to believe that the existing schools of Political-economy having reached this stage*, a different method of pursuing the study may now be introduced. What the nature and the character of this method ought to be, may be indicated by again referring to the history of astronomy, at a later and a better epoch. The future progress of an immature branch of philosophy may often be better understood by tracing the history of another branch of older growth, than by limiting our researches to an examination of its own conditions.

When civilized man had long ceased to speculate whether the planets "are born, and die, and have sexes;" when a neglected theory of a sect of the ancient Pythagoreans had been revived, and demonstrated, by Copernicus;

* "It is not possible to read the works of the most eminent professors of the science of Political-economy without being struck, not only by the different sense frequently attached to the words they use, but also by the great difference of opinion in regard to its principles, their application, and their results." — *M. Mignet*.

when the skill of Galileo, the inductive sagacity of Kepler, and ultimately the genius of our fellow-countryman, had established the Newtonian philosophy, there stood revealed to science naked truths, causal and formal, simple abstract laws of Nature, governing, probably, the whole universe of matter, but never betrayed to human eye by any form of matter in single and undisturbed operation. No sooner were the laws of gravitation and of motion demonstrated, than it became evident that all attempts to represent the planetary orbits by simple geometrical figures must be unavailing, and that these could be traced out only by determining the magnitude and the direction of the forces acting in each particular case. This method having been accordingly adopted by all the illustrious philosophers who have adorned the Newtonian school, it is needless to insist with what success their threads of truth have been woven, to delineate the path of each wandering luminary.

It will be the object of this work to investigate some of the elementary laws that combine to produce the occurrences which Political-economy observes, and attempts to control; to

exhibit as far as may be possible the causal and formal principles of Value; to trace the chief causes and effects of this much debated phenomenon; and to enunciate the form of the laws according to which it is governed by its causes, and it governs its effects. Abstract as these principles must necessarily be, and apparently remote from practical application, it may still be sufficiently obvious how great would be the advantage that a knowledge of them would confer, if such knowledge could be gained. It is therefore only requisite to indicate the path, and to specify the means by which we shall here attempt to attain this object.

When we reflect upon the series of events which, in the popular acceptance of the terms, without reference to any school of Political-economy, constitute the production, the distribution, and the consumption of wealth, as they are known to each of us by daily experience, it becomes at once evident, that whatever may be the natural laws which govern each of these phenomena, *the thing governed* is the mutual relation, direct or indirect, of two simultaneous events, one occurring in the province of human nature, and the other in the

external world. When nations *produce*, laborious efforts are made and felt by men, whilst matter receives improvement; when they *exchange*, quantities and qualities are mentally compared, and actions are decided on and executed, whilst forms of matter are transferred; when they *consume*, satisfaction is felt, whilst material objects are absorbed, or resolved into other elements: on each of these occasions there occur simultaneously mental phenomena and physical phenomena, mutually connected by laws, to determine which is the chief object of abstract Political-economy. If the influence of the external world in satisfying the wants and gratifying the tastes of man's sentient organization, and the reciprocal influence of his will in moving and fashioning external objects through the agency of his bodily organs, produce the events with which the *art* of Political-economy has to deal, it is evident that the *science*, after having defined and classified these states of mind, and these conditions of matter, must investigate the laws of their mutual relation.

It will probably be found, on a reference to the best treatises of Political-economy,

that the physical conditions of matter with which this science is concerned, have alone been hitherto investigated by means of actual observation, and comparison, and experiment ; if, indeed, it be not found that, even in this part of the subject, there have been often introduced, as principles, vague surmises, and arbitrary assumptions. A knowledge of certain forms of matter, existing in various quantities and qualities, and produced, distributed, and consumed, with various degrees of rapidity, may even now be said to constitute in popular acceptance, the whole science of Political-economy. There appear to remain still unexplored, at least by the only certain methods of investigation, the mental conditions of the subject, and, consequently, their true relation to the physical conditions. If the whole subject be adequately described as the wealth of nations, and *wealth*, the physical or extra-human part of the subject, be regarded as having already been sufficiently investigated, *nations*, the human part of the subject, remain to be investigated, so far as their physiological and mental susceptibilities and powers affect, and are affected by, the

production, the distribution, and the consumption of wealth.

This part of the subject of Political-economy we shall here endeavour to approach, with whatever light may be shed on it by cognate or bordering tracts of philosophy. A very little consideration will probably make it manifest, that in order to conduct this investigation according to the system, and in the order which alone can be successful, we must commence, in the present state of psychology, with discussing questions which properly appertain to that branch of philosophical inquiry. Political-economy, indeed, like every other portion of political philosophy, ought, in justice, to be required to investigate those principles only which are peculiar to social and political conditions of life, or which are never seen in operation except when men are observed in the form and under the condition of aggregated masses, connected by social ties and bound by civil institutions. Thus a discussion of the mental laws which govern such subjects as Wages, Profit, Competition, Speculation, ought, in strictness, no more to require to be prefaced by an inquiry into elementary

principles of the human mind, than a discussion of those conditions of land, or of the precious metals, which concern Political-economy, ought to, or do, require to be prefaced by an exposition of their mechanical or chemical properties. Imperatively necessary as it is that the student, before he investigates the superadded mental laws, which influence the actions of aggregated men, should acquire a knowledge of the primary mental laws which guide the actions of each isolated individual, the writer on Political-economy might not unreasonably have expected that these would be found to be briefly explained in works on the philosophy of the human mind; not because he might then complacently ignore these mental laws, but because he might refer to them intelligibly, and with confidence. When, however, he has recourse to these works, he finds that, concerning those normal principles of mind which govern many elementary conditions of Political-economy,—such as the origin and growth of the conception of value, the degrees in which it is entertained, the desires which it engenders, and the productive actions which these cause,—little specific information

can be derived from them, and this only at the cost of travelling through a wide extent of metaphysical inquiry. The knowledge of nature communicated by these works, in itself of great significance, yet not having been collected for the purpose of solving social problems, and, consequently, not being presented in the form necessary for such application, will generally be found to afford little assistance to those whose object it is to investigate the relations of human nature, and of wealth, under the influences of social life.

The Political-economists of the present age are thus compelled to choose between the alternatives of gathering for themselves the preliminary information requisite to insure their success, or of proceeding without it. It is unfortunate for the progress of this branch of political philosophy, that the latter alternative has been, almost invariably, adopted. If it has been placed beyond the reach of disputation*, that the whole field of philosophical inquiry is *by nature* divided into a series of

* Philosophie Positive, par A. Comte, — a writer not less remarkable for his acute perception of some subjects, than for his blindness with respect to others.


provinces, of which the most simple is governed by one class of laws alone; the next in order by this, and also by an additional class of laws; the third by these, with the addition of a third class of laws, in continuous succession; the last province being governed by all the known laws of Nature: or, to pass from the abstract to the concrete, that whilst the celestial bodies are only known to be governed by the laws of gravitation and of motion, the inorganic matter of our globe is known to be governed also by the laws of chemistry; and vegetable life to be governed also by the laws of physiology; and animal life to be governed also by the laws of biology; and man (as we cannot but add) by the laws of mental philosophy in his individual capacity, and by the laws of political philosophy in his social relations: the maxim which has been deduced from a knowledge of this arrangement of natural conditions is not less indisputable, — that each of the more complex of these subjects, being governed by all the laws which govern every subject of inferior complexity, in addition to its own peculiar laws, ought not to be examined, until the difficulties which surround each of these

less complex subjects have been surmounted, progressively and seriatim. When this canon is applied to the study of Political-economy, it becomes evident, that this branch of philosophy cannot be thoroughly understood until the subordinate principles of psychology have been adequately investigated. It may perhaps be regarded rather as a matter of regret than of surprise, that this course has not been hitherto pursued, — that the superior attractiveness and practical benefits attending a knowledge of Political-economy, have induced its votaries to turn aside from the difficulties and the delay which must inevitably attend upon an inquiry into the elementary nature of individual man, and to postpone the solution of questions appertaining to this inquiry, until they might chance to occur in the investigation of the problems of Political-economy, and then to regard them only so far as the occasion might happen to require. A very little consideration, however, would have shown, that to advance thus prematurely, leaving in the rear difficulties which should have been reduced, is a method of procedure neither likely, nor deserving, to be successful. Had

physiologists attempted to learn the *whole nature* of animals, by making observations and conducting experiments wholly confined to the animal kingdom, — had they sought for a knowledge of the elementary laws of mechanical force through an examination of limbs and organs, or of the elementary laws of chemistry through an examination of cellular and vascular tissues, — can it be conceived that they would have discovered those important truths (such as the laws of motion, and the law of definite proportions) which have rewarded the labours of those who, with every advantage, have prosecuted the study of moving force, by observing the distant heavens, where its phenomena are exhibited undisturbed, and the study of chemistry, by examining the wide extent of inorganic matter, in which no other additional laws are seen in operation? What result, then, ought to be expected, when an explanation of the elementary principles of value (which, in defiance of every definition, influence powerfully the conceptions and the actions of every individual, whether living in solitude or in society) is sought for, not by examining the comparatively simple pheno-

mena of mind which consciousness and reflection open to each individual, but solely and exclusively among the complicated phenomena which are peculiar to social life? It may be confidently asserted, that almost every difficulty which has embarrassed or arrested the progress of Political-economists is to be traced to this circumstance — that, conceiving it to be possible to comprehend the more complex subject before they have explored that which is less complex, they have ascended, or attempted to ascend, the steps of philosophy *out of their natural order*.

An inquiry therefore into the natural laws of Political-economy — the economy of *nations* — requires to be preceded, at the present moment, and under existing circumstances, by an inquiry into that universal relation of mind to matter in which originate a large proportion at least of the sensations, the conceptions, and the actions of mankind: when there shall have been thus attained a right understanding of those fundamental principles of psychology which are the groundwork of Political-economy, the time will have arrived for entering confidently on the discussion of



those secondary mental principles which are exhibited only in social phenomena. In order to commence this preliminary investigation with the most profitable expenditure of labour and the best prospect of success, it will obviously be expedient to search for all the information on this subject that can be derived from other branches of philosophy, and especially from that which professes to explain the operation of the human mind by means of self-observation and reflection. Very little consideration will suffice to produce a conviction, that a large proportion of the various mental laws which govern the thoughts and influence the actions of man, must govern those thoughts and influence those actions which have reference to objects so frequently present, so widely diffused, and so highly interesting, as are those which constitute Wealth. Without impugning the legitimate pre-eminence in power and in dignity of religious and moral feeling, of the ennobling love of the sublime and the beautiful, and of the consequent cultivation of the affections and the intellect for their own sake, it must be admitted, though with reluctance, that *numeri-*

cally those thoughts and actions of mankind in which originate the production, distribution, and consumption of Wealth, predominate over every other class of thoughts and actions. If, then, psychology professes to explain the mental laws which govern human actions, it may reasonably be expected to shed some light on that class of actions which is more numerous than any other ; and its observations may be referred to with confidence by the Political-economist, as likely to assist his initiatory researches, to furnish knowledge which, if it be not obviously and immediately applicable to the solution of his problems, may be rendered so at the cost of little labour, or if it be not productive of available truths, may at least serve to point out dangerous errors. The laws of nature which psychologists have discovered, through the observation and analysis of the internal phenomena of their own minds, afford a conclusive proof that the philosopher who neglects this means of knowledge, whilst professing to elucidate the nature of the feelings and actions, whether of individual or of social man, errs not much less than the ingenious schoolmen of the middle ages who,

with deductions drawn from mental imaginings of quiddities and entities, and the perfectibility of numbers, laboured to demonstrate the laws of physical nature, whilst closing their senses to the evidence of physical occurrences.

In pursuing the course indicated by these and similar considerations, we shall be led to examine, in the first instance, certain elementary principles of human susceptibility and of human action, deriving from physiology and psychology such general information as may forward this purpose, and especially adopting from these branches of philosophy such marks of classification as may appear to be applicable to our subject. It may be right in this place to premise some explanation, and it may also be requisite to offer some justification of this initiatory method of classifying the subject-matter of Political-economy, since the classification adopted by a new system of philosophy generally affords both a test of the system to those who criticise it, and a chart of the subject to those by whom it is investigated.

When it has been premised that all the phenomena of Political-economy are of two

kinds, caused severally by the action of matter on man, and of man on matter,—and it has been concluded that the conditions of matter, which affect these phenomena, have already been sufficiently discussed, and we, consequently, commence an examination of human nature, in the expectation that, being the higher of these two fields of inquiry, and being likewise the object on which the art of Political-economy must primarily operate by legislation, it will be found to afford such marks for classifying the whole subject as the experienced investigator would most desire to possess,—the question naturally arises, in what part of human nature are these marks to be sought for? What is that succession of mental states which originates in the fruition of external objects, and ultimately so influences the will as to cause their reproduction? and in which of these successive phenomena are the best classificatory marks to be found? A glance at the several successive links in this chain of causes and effects will suffice to answer this inquiry. Matter comes in contact with human organs externally, as in consumption, or laborious efforts are originated internally, as in production and distri-

bution; from these causes there arise sensations, which are more or less satisfactory, or the reverse; these sensations, when remembered together with the objects, or together with the actions in which they originated, give rise to complex conceptions, in which the objects and the actions are regarded as more or less valuable: thus, briefly described, is constituted the chain of causation which leads inwards from matter to the seat of our ideas. Again, that which leads outwards from the seat of our ideas to matter may be indicated thus: the conception of an object of preponderating value, and known to be within the possibility of attainment, is formed and entertained; a desire to possess the object ensues; the gratification of this desire is determined on by the will; the intellectual faculties, or the bodily parts, are exerted; their efforts tend directly, or indirectly, to affect external matter. If these phenomena be considered consecutively, it is evident that the principal motive by which the performance of these actions is to be regarded as instigated, and on the conditions of which the manner and degree of their perform-

ance chiefly depend, is the conception of value* mentally entertained. It is obvious, therefore, that it is to this mental conception, if circumstances will permit, or (if it be necessary to search elsewhere) to such of its causes and effects as are nearest to it in the chain of causation, that we must look for the classificatory distinctions of Political-economy.

In the present condition of psychological knowledge it will probably be found that there is much difficulty in defining any purely mental condition so accurately and intelligibly as to render it available to mark the classes which constitute the subject of any branch of political art. If any mental principles can be so defined, they are probably those which govern the association of ideas, usually designated the law of former co-existence and the law of resemblance or contrast. We shall have occasion to observe that these laws of mind, the most definite perhaps, and the most available for

* "The question of value is that into which every problem finally resolves itself: the appeal comes back to that tribunal, and for that tribunal no sufficient code of law has yet been matured which makes it equal to the calls upon its arbitration. It is a great aggravation of the other difficulties of economy, that the most metaphysical part comes first." — *T. de Quincey*.


the purposes of practical art, that psychology investigates, govern the trains of thought which guide the different classes of productive actions, and that they may therefore be employed to denote more accurately, than is accomplished at present, the different classes of our industrial population; operating, however, as do these intellectual laws, not antecedently, but subsequently to that conception of value which forms the main subject of our inquiry, they will be judged (according to the received canon that science ought to mark its classes by causes, and art to mark its classes by effects) better adapted to serve the purposes of the art than of the science of Political-economy. It appears expedient therefore, at the present time, not to attempt to classify our subject by means of distinctions selected among mental conditions, but rather to trace back the causes of these conditions until we arrive at ground which offers a firmer footing. In order to gain this position we might perhaps feel disposed to pass immediately from the consideration of mental conceptions to the consideration of the forms of matter from which they are derived, and in which, it may be confidently anticipated, there

will be found marks both palpable and definite, — to pass at once from the mental conceptions of valuable objects, and the sensations which engender them, to the valuable objects themselves from which these are derived, — were there not other considerations which ought to make us pause before we depart thus far from our main subject, in the absence of an absolute necessity for so wide a deviation. The further removed from the subject itself which it is desired to classify are the phenomena selected to designate its classes, the more distant the point at which they stand in the line of causation, the less confidence will be felt, not that they are definite and intelligible, but that they are certain signs of the classes which they profess to designate. When the more immediately preceding causes of a phenomenon have occurred, its occurrence can obviously be confided in more certainly than when any of its remoter causes have occurred. If, for instance, it were desired to mark by an external sign the presence or absence of the mental sensation of light, should the phenomenon selected for such a sign be the presence or absence of external light, it is obvious that this would often be

calculated to mislead, whilst a phenomenon more immediately preceding the sensation, as the contraction and dilatation of the pupil of the eye, might be found to afford a more faithful indication of its occurrence. Bearing in mind these considerations, we shall conclude, that the field in which the classificatory marks best adapted for our purpose exist, is not that of external material Wealth,—a field not less objectionable perhaps on account of its remoteness from the seat of our ideas than are these mental states themselves on account of their impalpability,—but that intermediate field betwixt mind and external matter which is offered by the organization of the human body, as exhibited by the researches of anatomy and of physiology. It may be hoped that the facts which we shall collect in these tracts of natural philosophy, for the service of Political-economy, will be found to have a sufficiently near connection with mental phenomena to be used as certain marks of their occurrence, and will also be found to be of a character sufficiently definite to be so used without risk of misapprehension.

When, in our further progress, we shall have

reached the advanced field of inquiry offered by statistical records, the phenomena which it will exhibit will naturally be found to require further and more definite marks of classification. No argument therefore will be needed to justify the introduction into this part of our subject of other modes of classification, and especially of that which is founded on the distinction between space and time, or in applying which the consideration of time is abstracted whilst we are engaged in investigating relations of quantity, and these again are abstracted whilst we examine the effects of time ; a distinction which, it is needless to say, has rendered essential service to the study of the most difficult subjects of natural philosophy, and which promises to be of equal service to the study of a subject so vast and so fluctuating as the actions of the human masses. The terms statics and dynamics, used to designate the divisions into which our subject is thus divided, are undoubtedly open to the objection that, being imported from mechanical science, and being therefore replete with purely physical associations, they may tend to materialize our search into human nature by suggesting



unfounded analogies; since, however, these terms have been already in many cases diverted from their original signification, having even been applied by foreign writers to the province of history, it will probably appear a wiser course to employ them for our purpose, than to coin new expressions, when we are obviously compelled to choose between these alternatives. With respect to the more important consideration, whether the subject of Political-economy can, like that of mechanics, be divided into classes marked respectively by time and by space as their characteristics, it may be observed that, whenever the subjects of our scientific researches are found to have features in common, there appears to be no good reason why these should not be used to classify all such subjects; but, on the contrary, that there are many reasons in favour of such a practice. Philosophical investigation is an *art*; the natural boundaries which define and denote the subjects of investigation are among the instruments of this art; and if these instruments have been successfully employed on former occasions, they may obviously be applied to a new subject with all the advantage

of skill derived from experience. As a surveyor employs the same rules of geometry in measuring the areas of different provinces, without allowing their geological, meteorological, or any other distinctive peculiarities, to interrupt his consideration of space, the investigator of different tracts of philosophy ought not to be deterred by their differences from using the same means to investigate that which they have in common. The whole subject of Political-economy will therefore be found to be divided into two parts, phenomena of co-existence and phenomena of succession, denoted respectively by the terms statical and dynamical, without, it is hoped, the occurrence of a supposition that there can exist any connection between the study of physical science and that of Political-economy more than this, that certain characteristics which these subjects have in common, and which have been successfully employed in the classification of the former, may be so employed in the classification of the latter, and may also be advantageously denoted by the terms by which they are already familiarly known. False analogies, wherever they exist, may be always detected by examining

the proofs of our propositions. If these be valid, the truth cannot be impugned, however it may have been reached, or in whatever language it may be exhibited.


Of the general purport of this work, it may be observed, that the object aimed at throughout is not so much to settle definitively certain points, as to establish the true method of investigating Political-economy. Whilst, therefore, all discussions on the definitions and on the marks of classification adopted in existing treatises on the subject are as much as is possible avoided*, no further indulgence is asked for those which are introduced here than that they may be received temporarily and provisionally, as perhaps the most useful which the present state of knowledge supplies. It is indeed to be desired, and it is also, in that part of the subject at least which is connected with physiology and psychology, to be expected, that other and better marks of classi-

* "How much I should prefer to say simply how things are, without troubling myself with the thousand aspects under which ignorance sees them. To explain the laws by which society prospers or decays would be to ruin *virtually* all sophisms at once."—*Sophismes Economiques*, translated.

fication will be adopted, when these branches of learning shall have been extensively applied to the elucidation of Political-economy. If there is a natural footpath through creation, by following which every object is seen to be nearly blended with that which precedes and with that which follows it, each successively exhibiting a difference so minute as to give rise to the fanciful theory of natural development, it is evident that no single one of these minute differences will serve definitively to distinguish the classes into which the limited capacity of the human intellect requires objects to be divided for its convenience. A natural system, therefore, marking each class by its general character, composed of several of the minute particulars exhibited by several of the individuals which compose the class, must ultimately supplant, as it has already supplanted in botany, every system of arbitrary classification. Whilst, however, this part of the following discussion is to be regarded as a matter of merely conventional arrangement and as necessarily ephemeral, the method of pursuing this and every other branch of philosophical inquiry possesses alike a graver import, and if

rightly established, lays claim to a more lasting reception ; there are also, it is believed, collateral considerations, in consequence of which there may be attached to the method of investigating Political-economy here pursued a more than usual degree of interest. If this be the true method,—if it be right to pursue in concert the study of individual man and of aggregated societies, to observe simultaneously, and to refer to one common principle, mental phenomena felt internally, and social phenomena known through statistics,—it is not unreasonable to expect that each of these branches of philosophy will shed upon the other a light which may be compared to that which the laws of moving bodies have derived from the cognate researches of Terrestrial Dynamics and Astronomy ; that the facilities for constant observation, with every advantage of proximity and opportunity, joined to the power of making experiments, which are possessed by Psychology, when brought to bear upon the problems of Political-economy, must conduce largely to a right understanding of their character ; whilst the advantages possessed by Political-economy, in the enduring continuity

of its phenomena, in their certainty placed beyond the reach of cavil, and in their exact representation by numerical expressions, when imported into the study of Psychology, must furnish a more definite language for the representation of its principles, and serve to secure for them more general acceptance. If the names of Locke, and Brown, Dugald Stewart, and Mackintosh, with others less familiarly known in this country, are justly celebrated, some part at least of the discoveries, by which their celebrity has been won, must deserve to be examined and applied by Political-economists, not presumptively, as is the case at present, if indeed they are even thus applied by those who profess to explain the wants, and feelings, and actions of social man, but connectedly and avowedly for the express purpose of elucidating this class of problems. If, on the other hand, the progress of nations in consumption, and production, and distribution, has been faithfully portrayed by the perseverance and skill devoted to statistical records, ought not this indisputable evidence of the operations of mind to be used to illustrate their obscurity? Is it unreasonable to



anticipate that Psychology may thus eventually become a demonstrated science, and that Political-economy, advancing those principles alone which are known to be true, may find their results continually tend to agree more closely with actual phenomena, as the effects of each newly-discovered principle are from time to time brought into calculation?

If it shall ever be found possible to bring to the investigation of these co-ordinate branches of philosophy the aid of pure mathematical science, in what degree their language will become more settled, their observations and experiments better directed, and the remote consequences of passing phenomena more faithfully deduced, will be most justly apprehended by those who are most conversant with the history of natural philosophy.

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NATURAL ELEMENTS
OF
POLITICAL-ECONOMY.

INTRODUCTORY CHAPTER.

IF any one ignorant of the facts disclosed by statistics were to be informed, that there exists a science of human actions — a science which not only utters predictions concerning these actions that are found to be verified by subsequent events, but which also delivers such predictions in numerical language, expressing both the quantities that occur of the objects predicted and the time of their occurrence—he would probably feel some difficulty in conceiving the nature of this science. He would feel assured that the line of conduct which will be pursued, during a long period of time, by any single individual, cannot be



thus accurately foretold ; that long and familiar acquaintance, if it imparts some knowledge of character, and indicates certain probable contingencies, cannot confer this power of prediction ; that little more of this power can be derived from an extensive experience of the general ways of mankind, or from a profound insight into those abstract laws of Psychology which govern the sensual susceptibilities, the intellectual capacities, and the efficient motives of human action.

If, however, such a person were to be further informed, that the science in question treats of actions which can be seen only when great multitudes of men are congregated together in one political body, some considerations might possibly arise to assist his conjectures. To a mind conversant with the nature of those physical phenomena, the variations of which can be observed in a multitude of different places, or at a multitude of different times, and of which the average amount can be expressed in numerical language, it might appear not inconceivable that there could exist some analogy between the characters of multitudinous physical events

and of multitudinous human actions. It might, for example, occur to such a mind that the *average* amount of the weight, and of the temperature, and of the moisture of the air can be confidently assigned to any given place, as a constituent of its characteristic climate, and that the recurrence of this amount may be confidently predicted, although these properties of the atmosphere, when examined in detail, are found to be scarcely less variable than the majority of human actions. It might thus, perhaps, be surmised that the subject matter of some parts, both of physical and of political philosophy, however inconstant in appearance, would be found to be alike subject to invariable laws of Nature; and that these might be expressed in numerical formulæ, which would be found to approximate more nearly to a perfect representation of the exact truth as the observations, on the average of which they would be based, should be extended over larger spaces, and be continued through longer periods of time.

If the possible existence of such a science as we have described were to be thus faintly

indicated, it might occur to the inquirer to pause, and reflect whether any analogy can be reasonably deemed to exist between the movements of purely material substances and the actions of animated beings, or whether there be not something in the mystery of life incompatible with the supposition, that any of the actions of a living creature are guided by invariable laws of Nature. To resolve this question by the simplest and the most incontrovertible evidence, recourse would, in such a case, naturally be had to that field of observation in which the laws of mere animal life are paramount, and in which also their effect can be observed in large numbers of instances ; such as is offered by the actions of several gregarious families of the brute creation, which live in a state of nature, and carry on their respective modes of production and of consumption in harmonious co-operation. Without referring to natural history for an account of such works of the animal kingdom as the houses of beavers, the accumulations of ants, the migration of birds, and the like, if the personal attention of the inquirer were to be directed to the labours of a few hives of

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bees, and he were to register the amount of their industrious population and the quantity of honey accumulated and consumed during several successive years, he would find it impossible to resist the conviction that these actions are governed by fixed natural laws of animal life, the operation of which could be confidently predicted, in time and in quantity, were there to be acquired an accurate knowledge of the surrounding conditions of inorganic matter and of vegetable life. The conclusion would be irresistible, that a quasi-Political-economy of these and other similarly constituted industrious swarms is a *possible* science.

The preliminary objections of such an inquirer would now perhaps be entirely removed if he were to be informed, that Political-economy treats only of those human susceptibilities and appetences which are similar or analogous to those which he has witnessed in the brute creation; that it examines only those motives which are derived, more or less remotely, from the attraction of pleasure or the repulsion of pain, and that it never attempts to enter those higher paths of human

conduct which are guided by morality, and by religion. Production, accumulation, distribution, consumption, might now be conceived to be modes of action, performed by human societies in a manner, indeed, as much superior to that in which they are performed by gregarious animals, as the human hand and the human organ of speech are superior to *their* corresponding bodily parts, but still in no less implicit obedience to fixed laws of Nature. It might occur to such an inquirer to reflect, that the involuntary movements of certain parts of the body, as the pulsation of the heart, and the inflation of the lungs, are known to be subject to fixed and invariable physical laws, no less in the case of the human subject than in the case of the lower members of the animal kingdom; that these movements can be examined independently of, and without reference to, those predominant, intellectual and moral and religious aspirations to which, in common with all the other functions of the human body, they subserve; that, as late discoveries seem to indicate, all such purely physical actions as those to which his attention has been directed, originate (in the

absence of special circumstances), not, as was formerly supposed, in the brain, but in that elongation of it which is contained in the spinal column, and which man shares with the lower vertebrated animals ; that actions, which are totally dissimilar in their moral aspect, may be similar in the aspect which they present to Political-economy, as, for instance, that work of the same description may be executed alike by several individuals, whose ultimate motives may be severally want or ambition, self-gratification or natural affection, avarice or charity, and that the fixity, therefore, of the natural laws of Political-economy is in no way inconsistent with the freedom of the will to choose between good and evil ; that moralists have pronounced man to be a creature of habits, gradually formed throughout his life, and only occasionally disturbed by the active interposition of thought, in imposing on him the duty of closely watching the formation of these habits, and that phrenologists, with whatever authority, in confirmation of this view, have asserted, that the effective faculties must exercise a preponderating influence over human conduct, because their cerebral develop-

ment is far greater than that of the intellectual faculties; that when large numbers of human beings are observed together, the prevailing laws, the influence of which is scarcely perceptible in each single action of each individual, may be found to stand out in marked pre-eminence, the lesser disturbing forces tending to neutralise each other: these, and many similar considerations, might perhaps occur to such an inquirer, and induce him to turn away from every attempt to solve the mystery of fixed fate and free will,—a subject which must for ever be impenetrable if it be that human knowledge can only discern the laws, and not the essence of objects,—and might lead him to the conclusion, that when human nature should be examined abstractedly, and the human masses should be regarded as entirely occupied in collecting the sweets which lie hid in the wilds of the creation, desirous only of collecting, and using, and accumulating money, the industrial and fructifical actions of nations would be found to be governed by definite and invariable laws of Nature.

But whatever anticipations might arise,

from these and similar considerations, respecting the possible existence of such a science as we have described, there could never be engendered that degree of conviction which would result from an examination of the actual occurrences of social life. If the attention of our inquirer were to be directed to the reports of the numerous associated companies which have been enabled by combination to execute extensive works for the use of the public, deriving thence annual incomes which recur in amounts scarcely less regular than are the harvests of fruits which the earth yields to its cultivators, it would be found impossible to resist the conviction, that the human actions, in the continuance of which these undertakings confide, obey fixed natural laws. In the returns of the profits accruing to Railway Companies, Canal Companies, Life and Fire Insurance Companies, Dock Companies, and the like, there would be recognised phenomena which in the past have continually recurred, in quantities varying only within certain definite limits, and which, it is impossible to doubt, will so recur in the future, if undisturbed by extraneous occurrences. Still

more confidently would this conviction be entertained after an examination of documents in which the movements of still larger numbers of human beings are recorded. Should the inquirer contemplate, in any authentic compilation of national statistics*, the figures expressing distinctively the comparative numbers that have occurred, in successive years, of the births of males and of females; the deaths at different ages; the marriages, with a specification of the age of each party; the quantities of each sort of commodity manufactured, imported, or exported; the prices of public funds; the amount of crimes; the numbers of letters delivered; and the other various occurrences which affect the population, production, interchange, accumulation, and consumption of a nation, he would feel assured that the continuity of these occurrences is produced by fixed laws of Nature, which originate in no human legislation, and which, silent as the laws that rule the starry firmament, exercise their influence over man-

* Porter's Progress of the Nation; Journal of the Statistical Society of London; Macgregor's Commercial Statistics.

kind. In the subject of Political-economy, he would discern principles, the operation of which in the past can be recorded accurately, and the continuance of which in the future can be relied on; and in the financial measures which in every successive year are enacted by the governments of civilised nations, founded on predictions of the events of the ensuing year, he would recognise the operations of an art, guided by the exercise of sound judgment, and reposing a reasonable faith on the stability of natural laws.

Having reached this conclusion, the philosophical inquirer might be led to consider which among the numerous modes of human action would properly constitute the subject of a science of this character. In order to resolve this question, he would naturally proceed to inquire what is the end and aim of the science—is it merely a barren tract of knowledge, or is it available for improving the physical condition of mankind?—in the latter case, to what special objects is its application directed?—what instruments does it employ?—and by what conditions is their field of operation circumscribed? An answer to the latter of

these questions would be naturally sought for, first, because arts are usually practised with more or less success before their parent stock of science is matured; and some confidence might be felt that this answer would be correct, since the exigencies and the capabilities of an art may be justly appreciated even by those who entertain erroneous theories of the science.

It is possible, however, that our inquirer, not perhaps if he were now approaching the subject for the first time, but if he were versed in the tenets of the non-interference schools of Political-economy, might feel reluctant to admit the possibility of such an art being beneficially exercised. Respecting those tenets, it will be sufficient to observe in this place, that, deduced as they are from other theories of the science, they cannot be deemed conclusive against that which is here advanced, unless they can be also deduced from it, whilst their spirit, when regarded *à priori*, is opposed to the experience of the whole course of scientific discovery. It has been always found that Nature's laws are so constituted as to produce effects which are usually beneficial

to mankind to a certain extent, but which are capable of being rendered more beneficial by the application of human art, whenever the subject is amenable to the influence of human power. It is evident, indeed, that the more complex and delicate is the subject, the greater amount of knowledge must man possess before he attempts to control the operation of its laws—that, by interfering, he may either mend or mar their work; and it is well known that the latter of these effects has been but too often produced, as in many recorded systems of agriculture, and of medicine, where power has been exerted without adequate knowledge, and art has killed where Nature would have cured. But these and similar considerations can never rob man of his high destiny; he has been sent forth to conquer the world, and to subdue it, and cannot now be taught that he ought to attempt nothing because patience and perseverance are found to be requisite for the purposes of his mission.

Whilst, however, it is assumed that an art of Political-economy may be deduced from the principles of the science, and *can* be practised, to infer that it ought to be so practised irre-

spectively of the whole cognate art either of civil government or of individual conduct, as deduced from the principles of several other branches of learning, would be an unfounded assumption. When, in obedience to the dictates of experience, philosophers endeavour to investigate the nature of things, that they may be the better able to make use of them—to discover what is, that they may the better produce what ought to be—to learn science, that they may practise art—there is nothing to prevent, and everything to induce them, to divide their intellectual forces, and to examine separately the different tracts of their inquiry, with the tacit understanding that, in the end, the fruits of their researches shall be mutually communicated to each for the joint benefit of all. But when this multiform knowledge is to be applied to the advancement of one entire purpose, the amelioration of one entire object, or the execution of one entire undertaking, it is evident that no abstract and divided attention to a single branch of science will suffice to guide rightly the hand of him who acts; on the contrary, every description of knowledge, that is connected with the subject, must

be brought to shed light upon it, and to each motive that results from their separate consideration, must be ascribed its due share of importance, in order that the resulting stream of conduct may be rightly directed. As a nation, therefore, constitutes one entire object; and to attempt to govern it is one single undertaking, in the execution of this design all the motives that arise from numerous considerations, such as those of religion, morality, justice, and honour, must unite to determine the will of the executive, whether its power be in the hands of a single individual or of many acting under the control of one. Of this highly complicated art Political-economy can only be regarded as one inseparable member, acting in obedience to the mandates of its tributary science only when they meet the approbation of the governing head, guided by the joint advice of this and every other cognate science. To assert that Political-economy can be practised as an independent art, and to deny that it can be practised in its proper place with beneficial results, in due subordination to other branches of political art, are errors, each probably tending to foster the

other, and both alike injurious to the interests of society. If the latter assertion were to be credited, the growing physical evils of progressive civilisation would be left without hopes of redress; if the former, the remedies applied to them would be framed without reference to the highest objects.

If the purpose of statesmen in practising this art were to be stated, in the most general terms, to be, to frame the laws most conducive to the prosperity of the nation to which they are addressed, it would probably be felt that, although this statement is incontrovertible, it leaves much definite information to be desired. That every free government must operate by means of laws, publicly promulgated, and addressed in the first instance to man as the agent, and acting ultimately on man as the object, is sufficiently manifest; but it is perhaps not so clear how the laws which carry into effect the purposes of Political-economy are distinguished from other laws. The more obscurity will be found to envelop this question from the circumstance, that to the word Political-economy there are commonly attached two significations, expressing what may be

termed a greater and a lesser Political-economy; the former embracing a wide range of subjects, such as education, population, and police, which extend to nearly every question of domestic policy; the latter limited to the production, the distribution, and the consumption of property. In order to designate the field of our present inquiries, it may be well to premise, that it is to the latter of these subjects alone that Political-economy is understood to be directed in the following treatise: the art which it is understood to practise is that which arbitrates over *property* by the strong arm of the law,—necessarily so arbitrates where taxes must be levied, and has the option of so arbitrating where no such necessity exists. To indicate the class of material objects contemplated by the laws which are framed under the guidance of this lesser Political-economy, it is only necessary to define what property is, or to what objects legal rights are attached,—a question for the determination of which it is fortunate that we can appeal to the science of law, as expounded by the judges who apply its principles to practice in each country. It must be a part of the province of every body

of laws to define what rights* fall under their jurisdiction, and to these definitions Political-economy may, and indeed must refer.

To delineate yet more accurately the aim of natural Political-economy, it may be observed that the laws of each country not only decide what are the objects which fall under their jurisdiction, but also decide which among these are exchangeable.† There is so deep a significance attached to the practice of exchanging,

* *Vide* Blackstone's Commentaries on the Laws of England, Book II. Of the Rights of Things. The following passage may serve for illustration:—"Many other things may also be the objects of qualified property. It may subsist in the very elements of fire or light, of air, and of water. If a man disturbs another, or deprives him of the lawful enjoyment of these; if one obstructs another's ancient windows, corrupts the air of his house or gardens, fouls the water, or unpens or lets it out, or if he diverts an ancient watercourse that used to run to the other's mill or meadow, the law will animadvert hereon as an injury, and protect the person injured in his possession." — *Black. Com.*, vol. ii., p. 295.

† Thus, by the laws of England, choses in action which were formerly inalienable, are now so no longer: difficulties have lately been removed from the conveyance of copyholds, and the claims of labour to combination and free circulation have been granted. It is a significant fact, that by these laws no man is allowed to sell himself as a slave.

that those things which form the subject of it can alone be truly said to occupy the attention of Political-economy when understood in its most limited sense; it is the explanation of the phenomena exhibited by them that causes its present difficulties, and it is their solution that will afford its future triumph. Communities, doubtless, have existed, and may again exist, having no private property in substance but only in use; the early Christians had all things in common, and so have some sects at the present day; and in a commonwealth so constituted, there may certainly be practised a rude art of Political-economy, resembling rather the ordering of a private household, than the administration of national resources. But it is when a right of common has been converted into a right of private property, with its mature accompaniment, a right of free exchange—when the charm of ownership is felt, with the certainty of reaping what has been sown, and with the power of improving without restraint, and of transmitting by will to posterity—that the groundwork arises for the exercise of an art guided by the precepts of abstract philosophy. The art of Political-economy then, in

its most scientific signification, may be said to be the art which frames measures addressed to men affecting the production, the distribution, and the consumption of exchangeable property.*

This point having been considered, we may now proceed to the question, what tracts of inquiry ought the science to investigate in order to procure the knowledge required by the exigencies of this art?—or, how is the subject of this science to be defined? As this question must have been suggested to every investigator of Political-economy, it may be well to advert, in the first instance, to the definitions which are perhaps now most generally accepted in this country.

“† Political-economy is now most commonly defined the science of the laws which regulate the production, distribution, and consumption of those articles or products that have exchangeable value, and are at the same time necessary, useful, or agreeable to man.” “‡ In so far as

* This definition obviously excludes from the province of the art some taxes of minor importance, such as a tax on armorial bearings, and a poll-tax.

† J. R. M'Culloch, note to *Wealth of Nations*.

‡ J. S. Mill, *Principles of Political Economy*, p. 25.

the economical condition of nations turns upon the state of physical knowledge, it is a subject for the physical sciences, and the arts founded on them. But in so far as the causes are moral or psychological, dependent on institutions and social relations, or on the principles of human nature, their investigation belongs not to physical, but to moral and social science, and is the object of what is called Political-economy." Of these two definitions, the former appears to be designed to direct attention to certain forms of external matter, the latter to the operation of internal mental principles; while both may, perhaps, be deemed to be alike wanting in that distinctness which the student would desire, and which may be obtained by a more minute analysis of the subject.

It is a natural condition of much importance, and one to which it appears to be especially necessary to direct attention in this place, that human communities are *living organisms*. This appellation would probably be considered just, even if nations were to be regarded as consisting merely of an aggregate of unconnected human beings, but much more justly may it be applied to them when they are

understood to be connected by the ties of marital and filial affection, of friendship, patriotism, love of society, love of display, and by all the other sentiments and passions which bind us, directly or indirectly, to our fellow-men, and the operation of which is most strikingly visible in such of our actions as are concerned with the realisation and the fruition of wealth. Now, it has been well observed, in reference to physiology, that no living organism can be fully characterized but by a description comprizing all the particulars, not merely of the organized body itself, but also of the medium in which it exists, not merely of its organs, but also of their functions—not merely of the agent, but also of the thing acted on. If this observation be applied to the subject of Political-economy, it is evident that every comprehensive description of this branch of philosophy must point expressly *both to man and to exchangeable objects*; to man, the organism, and to exchangeable objects, the medium by which civilised man is surrounded, on which his organs act, and from which they derive the means of his support, his satisfaction, and his gratification. The subject,

therefore, which Political-economy undertakes to investigate may be described as the relations of human nature and exchangeable objects—as the effects which human nature produces on exchangeable objects, and the effects which exchangeable objects produce on human nature—as the sensations felt, the conceptions formed, the calculations made, the desires entertained, the actions performed by mankind in consequence of the existence of exchangeable objects, and of the growth, the elaboration, and the allocation, of exchangeable objects, in consequence of the existence of mankind. If to this initiatory description (designed principally to mark the necessity of both man and matter being indicated in every definition of the subject of Political-economy) it be desired to affix some more definite description of each of these co-ordinate branches, to determine, with respect to matter, what portion of it is exchangeable, and, with respect to man, what part of human nature is concerned with that portion, both of these purposes may be answered by adverting to the nature of the art to which it is our aim to administer. This art, as we have

seen, in its strictest sense, deals only with those objects which its instruments, the laws of the land, can reach—with the production, the distribution, and the consumption of property, and emphatically of exchangeable property, as defined by law; and since the investigations of the science are necessarily directed to the same end, this description serves to delineate the tracts both of physical nature and of human nature which the science is called on to explore; the former being thus circumstantially marked as consisting of exchangeable objects, the latter as consisting of those thoughts and actions of mankind which are occupied with, or which have a relation to, such objects.

Not only, it will be observed, are the physical and the mental relations which Political-economy is called on to investigate, denoted by the circumstance that certain objects defined by law are produced, and distributed, and consumed, but this circumstance in itself constitutes the reason on account of which they are investigated, and claims, therefore, the exclusive attention of the Political-economist. As the students of other branches of

philosophy confine each his own researches to such qualities of objects as especially concern his inquiries ; as, for instance, in the relations of the atmosphere, the chemist discerns only a combination of gases, the mechanician a moving force, the musician a vehicle for sound, the naturalist a receptacle for the food of plants, so, in investigating the relations of men and exchangeable objects, the Political-economist regards exclusively the causes of their production, their distribution, and their consumption. In each of the twofold aspects of the subject he contemplates these phenomena exclusively ; whilst, investigating the physical branch, he abandons the consideration of every mechanical, chemical, and organic property, except so far as it affects their value ; and, while investigating human nature, he leaves to others every irrelevant inquiry,—to the historian the exposition of the causes and the effects of ambition, to the jurist the determination of the force of anger, to the artist the explanation of the sublime and the beautiful,—whilst he also examines, as they examine, sensations and conceptions, motives and emotions, he limits his examination to those mental susceptibilities

and powers which affect the phenomena of production, of distribution, and of consumption.

This tract of philosophy we shall attempt to investigate, by examining, in the first instance, not physical nature, but human nature, and by searching for the elementary principles which govern this latter subject through the evidence of our internal thoughts and of our familiar transactions, as illustrated by the researches of Physiology and of Psychology. To the facts disclosed by Physiology we shall have occasion to refer only at the outset of our inquiries, and this, too, for the purpose of demonstrating facts which may be, if we are so satisfied, received on the evidence of others. To Psychology, as we shall have to appeal for a wider extent of information, we shall also be compelled to trust on evidence of a different, and, as it will perhaps be considered, of a less satisfactory character: the causes of human action will necessarily be examined by the aid of our own internal power of perception, with little regard to the testimony of others apart from the contemplation of the phenomena of our own minds, and with the necessity in all cases of *feet*.

ing in order to understand. As the physician, who desires adequately to realise the state induced in the human subject by any novel application, will not trust to the reports of others, but will make experiments on himself, the Political-economist will meditate in the first instance upon himself, for the purpose of comprehending fully the motives of the actions of other men.*

On closing the avenues of external sense, and viewing, by the wondrous light of reflection, and under the guidance of Psychology, the world which lies within himself, the Political-economist, if he now contemplates this scene for the first time, will probably feel surprise, that there is so large a portion of his own mental nature with which he is not intuitively familiar, — that there are secret workings in the mind as in the body, phenomena, if they may be so called, of construction and of circulation, which, having cost ages to dis-

* “Observe, with the utmost attention, all the operations of your own mind, the nature of your passions, and the various motives that determine your will, and you may, in a great degree, know all mankind.” — *Chesterfield*.

cover, must now be learnt from others,— and satisfaction that this knowledge promises to be useful in solving many of the mysteries of Political-economy, by the interposition of that inexhaustible bounty of Nature which ever supplies the lover of truth with augmented power, in proportion to the increasing difficulties of his researches. In this internal world he may discern unsuspected phenomena: SENSES, which have commenced their education at the time of birth, and have been taught by Nature, during the unremembered age of infancy, to see things originally invisible, and to hear things originally inaudible, and which, before they are exposed to the scrutiny of the philosopher, differ from their original germ as the leaved and fruited tree differs from its seed; IDEAS, among which are not only embalmed the sensations that have been formerly felt, but there are also new conceptions that have resulted from them by a principle of intellectual combination, and succeed them in obedience to a variety of laws of suggestion or association; EMOTIONS, extending over days and years, now flowing on uniformly towards one definite purpose, now

swelling under the influence of a hidden impulse, casting away, perhaps, those who have not learnt to control them, but subsiding in obedience to the authority of those who know that, as there are physical substances which conduce to the health of the body, there are appropriate sensations and ideas, by a skilful application of which the mental constitution may be soothed or stimulated, its strength renovated, and its health restored. In this field it will be the purpose of the Political-economist to collect whatever knowledge may serve to explain the production, the distribution, and the consumption of exchangeable property. It is well known that modern geologists have often succeeded in demonstrating the composition of volcanic products by compounding similar substances in their laboratories, and inferring that the minute processes thus conducted are counterparts of the magnificent operations of Nature. With a similar intent the investigator of Political-economy will retire within the recesses of introspective reflection, and endeavour, with the aid of Psychology, to observe the composition of mental states similar to those which claim his attention in the wide

field of national industry. If, by minutely analyzing his own mind, he can discern the motives by the agency of which he becomes a consumer, a producer, and a distributor of exchangeable property,—if, from the elementary sensations of a gratifying nature, which, in definite degrees, attend the consumption of commodities in definite quantities, he can deduce the attribute of value mentally ascribed to them in definite amounts, and can thus detect the principle by the operation of which he is himself willing to exchange one commodity for another,—and if, from the elementary sensations of a repulsive nature which attend the production of commodities, he can deduce the attribute of what may be called *negative* value, mentally ascribed to the endurance of labour, and can detect the principle by the operation of which he is himself actuated to endure labour and to produce commodities,—he will feel assured that the same principles operate universally on all mankind, and originate those mighty phenomena which appear inscrutable to the superficial observer, because their causes lie hid beneath the field of political observation.

DEFINITIONS.

DEFINITIONS.

POLITICAL-ECONOMY.—The branch of philosophy which explains several important relations of man and matter, and shows how they ought to be dealt with for the ultimate benefit of man, by the exercise of legal rights, or by the establishment of legal liabilities.

VALUE.—An attribute ascribed by man to numerous objects, from a remembrance of their services in past times, and a conviction that such services are still available.

EXCHANGEABLE VALUE.—A variety of this attribute, ascribed to the class of valuable objects which is defined by the laws of each country as constituting property; the chief circumstances to which this distinction is due being that such valuable objects can be appropriated, and that they do not exist in quantities greater than are requisite to satisfy the wants and wishes of mankind.


STATICAL VALUE.—Exchangeable value, when regarded as simply relative; its various degrees resulting from the comparison of several co-temporaneous objects, and being measured by prices.

DYNAMICAL VALUE. — Exchangeable value, when regarded as causing the manufacture of the objects to which it is ascribed, being measured, in reference to time, by the rate at which such objects are manufactured.

CONSUMPTION.—That action and reaction of matter and man, by which matter supplies the means of gratification to man, while man diminishes or annihilates the valuable properties of matter. The former of these processes is the object of consumption, which is therefore denoted, physiologically, by the fact that, during its continuance, the operation of the *afferent* trunks of nerve-fibre prevails.

PRODUCTION.—That action and reaction of man and matter, by which valuable properties are imparted to matter, whilst reflex impressions of resistance are felt and sustained by man. The former of these processes is the object of production, which is therefore denoted, physiologically, by the fact that, during its continuance, the operation of the *efferent* trunks of nerve-fibre prevails.

DISTRIBUTION. — An intermediate process, that determines how valuable objects, which have been produced, shall be consumed.



COMMODITIES.—A term usually applied to valuable objects when it is intended to refer to the processes of consumption.

PRODUCTS.—A term usually applied to valuable objects when it is intended to refer to the processes of production.

LABOUR.—The active intervention of human agents enduring toil in the processes of production.

PRIMARY COMMODITIES.—Those commodities all the valuable qualities of which are classed among “objects of common sensation.”

SECONDARY COMMODITIES.—Those commodities all the valuable qualities of which are classed among “objects of special sensation.”

MENTAL LABOUR.—Labour is so called when the actions performed originate in the brain.

PHYSICAL LABOUR.—Labour is so called when the actions performed originate in the spinal column.

WEALTH.—A term usually applied to valuable objects when it is intended to refer, not to their production, nor to their consumption, but to their duration and accumulation.

BOOK I.



THE
PRINCIPLES OF PHYSIOLOGY
AND OF
PSYCHOLOGY
WHICH AFFECT
POLITICAL ECONOMY.

CHAPTER I.

Consumption and Production analyzed. — The Sensations which accompany Consumption examined. — Primary and Secondary Commodities. — Effects of Changes of existing Quantities.

(1.) LET the Political-economist, regarding himself, on the one hand, and, on the other hand, those forms of external matter which, as he knows by experience, are bought and sold in civilized communities, reflect what his own feelings would be if he should himself become a producer and a consumer of them ; selecting, at will, several articles of necessity or of luxury, let him consider what satisfaction is derived from them, and what toil is endured by those whose labour produces them ; what satisfaction, for instance, is derived from the warmth, the protection, the dignity, the beauty of raiment, and what toil is endured in preparing the raw material, in dressing, spinning, weaving, dyeing, making it up for use, and retailing it ; what satisfaction is derived from the gratification of appetite and of taste, the exhi-

laration of spirits, the health, and the strength imparted by various articles of food, and what toil is endured in growing, rearing, tending, storing, and dressing them ; what satisfaction is derived from architecture, sculpture, painting, and music, and with what toil their theories are elaborated, and their principles applied : these, or other such varieties of satisfaction and of toil, let him consider and compare, remembering that, although to aid his reflections information must be derived copiously from others, it is by a reference to his own feelings alone that his estimate of the mental accompaniments of Consumption, and of Production, must ultimately be formed.

The first intimation which this appeal to his own feelings will probably convey to the Political-economist is, that every adequate description of these two great classes of operations must distinguish them, not as being operations in one of which external objects act upon man, and in the other of which man acts upon external objects, since both of these effects occur simultaneously whenever men either consume, or produce, but as being operations, in one of which the end immediately

contemplated, and which constitutes the determining motive, is the effect of external objects on man, and in the other of which it is the effect of man on external objects. It is quite evident that in both Consumption and Production there occur a simultaneous action and reaction of external objects upon man, and of man upon external objects: when the operations of Consumption are performed, food may give support, comfort, gratification to men, whilst men masticate, swallow, digest, and assimilate food; raiment may give decency, protection, or decoration to men, while men expose raiment to friction, or to the influences of the sun and the atmosphere; but it is manifest that the *purpose contemplated* is not the destruction of food, or of raiment, but certain benefits accruing to the consumer with which this destruction is by nature indissolubly connected: and when the operations of Production are performed, whilst the labourer moves the soil, the weaver plies the shuttle, the carpenter constructs with wood or the mason with stone, resistance, difficulty, fatigue, are felt; but these are the inseparable adjuncts of labour, and not the *end proposed* or the

object immediately contemplated by the producer. It is clear, therefore, that these two great classes of actions will be rightly described, Consumption, as comprising actions of which the *motive* is the contemplated effect of external objects upon man, and Production, as comprising actions of which the motive is the contemplated effect of man upon external objects.*

(2.) When distinctive notions of Consumption and of Production have been thus formed, it will probably be felt that these modes of action still require to be denoted by marks more palpable and definite than those to which we have here referred,—that to refer to *motives* as marks of classification, is to employ for this purpose metaphysical abstractions, not clearly perhaps apprehended by some minds, and ill adapted for the purposes of practical art. In order to substitute for these abstrac-

* It may serve to illustrate this distinction, if we here refer, in anticipation, to the events of social life, and designate Consumption as consisting of those actions for the opportunity of performing which money is usually paid, and Production as consisting of those for the performance of which money is received.

tions, objects cognizable by the external senses, we may have recourse to Physiology, and consider the processes of the human organism that are ancillary to the mental processes with which we are here concerned.

When external matter produces *sensible* effects upon man, impressions are always made, in the first instance, upon certain trunks of nerve-fibres, which lead *to* the sensorium and produce sensations, which may be followed by a long succession of further mental phenomena; when man acts upon external matter, impressions are always made upon similar but distinct trunks of nerve-fibres, leading *from* the sensorium, and eventually producing contraction of the muscles, and a consequent exhibition of mechanical force; these two classes of fibrous trunks being never convertible—the afferent trunk, which leads to the sensorium, being never used for the efferent trunk, which leads from the sensorium—but each being used invariably, as the parallel lines of a railway are commonly, for distinctive communication, in opposite directions. Now, there appears to be no reason why these two several channels of

sensational influence, and of motor force, thus distinctly marked out by Nature, may not be employed to denote the two classes of human actions in which they invariably take a part,—why, when we require a mark to discriminate between the actions of which the motive is the effect of external objects upon the agent, and the actions of which the motive is the effect of the agent upon external objects, the former class of actions may not be denoted by the employment of the *afferent* trunks of nerve-fibres, and the latter class of actions by the employment of the *efferent* trunks of nerve-fibres. Since of these two descriptions of actions, when performed by a large number of individuals, the former constitutes Consumption, and the latter Production, Consumption may be defined as that class of human actions in which the instrumentality of the afferent trunks of nerve-fibre is predominant, and Production, as that class of actions in which the instrumentality of the efferent trunks of nerve-fibre is predominant.

(3.) Having described and defined these, the two great branches of the subject of

Political-economy, we may proceed to analyse them separately, commencing with the actions which constitute Consumption, since it is with these alone that human nature is occupied during the earliest years of life. As the distinguishing characteristic of this class of actions is the effect of matter on man, or the effect of external objects acting through the human body on the mind of man, our first inquiries will be directed to elucidate the nature of these mental effects.

Sensation, the mental consciousness, arising from the excitement of the nervous tissue, is easily recognised as, on the one hand, distinguishing animal from vegetable life, and as, on the other hand, being distinguished from other mental states by the characteristic that it is *immediately* caused by the action of the bodily organs, without the occurrence of any intervening mental state. Whilst the members of the animal and of the vegetable kingdoms advance alike from an undeveloped to a mature stage of existence, commonly imbibing the atmosphere and exhaling it in an altered state, deriving nourishment from external sub-

stances, growing in health or sinking under disease until the process of growth is completed, and then yielding to a gradual process of exhaustion, through which the constituent particles of their bodies become eventually subject to the laws of inorganic nature, throughout the whole period of these "two-fold movements of composition and decomposition, at once general and continuous," there exists this invariable distinction between the lives of animals and the lives of plants, that the former feel, and the latter do not feel, sensations derived from the contact of external matter. All the sensations, again, which are thus felt, differ from the conceptions which are derived from them by the aid of memory and imagination, in this respect, that whilst similar sensations and conceptions occur of form and colour, of taste and odour, of touch and of resistance, the latter may be entertained in the mind independently of the existence of matter, at various times and in various places, whilst the former are dependent on the presence of external objects, and are, therefore, limited by the limits of the organs of sense, and by

the nature of the objects which are within their grasp.

Of sensations, thus characterized, the attention of the Political-economist will be directed to those only which are occasioned by the Consumption, the Production, and the Distribution of exchangeable Property; and, since it is the purpose of his inquiries to trace through human nature those mental susceptibilities and powers, in consequence of which such actions are continually performed by human communities, these sensations will, in the first instance, naturally fall under two heads, according as they are felt with indifference, or with a sense of pleasure or pain.

(4.) Sensations which are felt with indifference can never be the efficient causes of intentional actions. As they are felt, so they are remembered, without interest or regard, attached to them or on their account, to any of the forms of matter which have caused them. That objects which excite such sensations only are frequently the subject of active industry, is a fact due to the intellectual processes of association and combination, which we shall hereafter have occasion to consider.

The objects which are regarded by the uneducated mind without any degree of satisfaction, such as raw materials of various kinds, could never become the subject of human action, were it not for those ulterior mental processes in consequence of which they are eventually regarded and esteemed as the causes and the constituents of other and very different forms of matter.

Sensations which are not regarded with indifference claim a large share of our attention, as the sources of the motives which cause every action of Consumption, of Production, and of Distribution. These sensations will, in the first instance, be conveniently divided into two classes, distinguished according as they are felt during Consumption or during Production, or (to refer to our definition of these actions) according as the afferent or the efferent trunks of nerve-fibres are in predominant use at the time of their occurrence.

The sensations which are paramount in Consumption being usually attended with pleasure, and the sensations which are paramount in Production being usually of an opposite character, it might at first appear

easy to denote our classes of sensations by a reference to this circumstance; but it would be found that such a principle of classification would often prove incorrect, whilst by referring to the channels along which these sensations are severally conducted, they are not only denoted accurately, but become circumscribed by the same definitions as the two great classes of operations with which we are here concerned. These two classes of sensations, accordingly—sensations attending upon Consumption, and sensations attending upon Production—we shall mark respectively by the fact, that whilst both classes alike are naturally conveyed by the trunks of afferent nerve-fibres, when the former are felt, the functions of these nerve-fibres are paramount, and when the latter are felt, the functions of the efferent nerve-fibres are paramount. The remainder of this chapter will be occupied with the consideration of the former of these classes—sensations attending upon Consumption.

(5.) If we reflect upon the variety of objects, sold in the poorest market, which immediately affect the senses, and consider how many are designed to sustain health, or to promote com-

fort, how many more to please the eye, to attract the ear, to gratify the taste, and if we further reflect how much greater a variety of such objects is sold in opulent cities, in extensive empires, in the civilised world, the number of the sensations that attend upon Consumption must appear to be exceedingly great. It is evident, however, that, numerous as these sensations are, they all pass along channels, the whole of which are comprised within the small dimensions of *each human body*; there appears also to be a strong antecedent probability that the relative importance of these several sensations to individual man, and to human communities, will be found to follow the various degrees of complexity, and of mutual subordination, manifest in the construction of these organic channels. We are thus led to recur to Physiology for assistance in classifying these numerous sensations.

The afferent or sensory nerve-fibres, distributed throughout the body in whatever proportions, and endowed with degrees of sensibility however different, are clearly divisible into two general classes—the nerves of the organs of the five senses, and the sentient


nerves of the other parts of the body; or, in the language of Physiology, the nerves of *special sensation* and the nerves of *common sensation*. Of the organs by means of which we see, hear, smell, taste, and touch, the eye, the ear, the nose, the tongue, and the skin, the external structure is so characteristic as to render any description unnecessary, but it may serve to denote the sensations conveyed by them if we observe that between the nerves of special sensation and the nerves of common sensation there exists this distinction — whilst the latter may convey to the sensorium more than one kind of impression, each of the former can convey only that kind of impression for which it is specially designed, — pressure, for instance, which, on the hand, excites a sensation of resistance, when applied to the eye may cause a sensation of light or of colour, and when applied to the ear may cause a “tinnitus aurium;” but excitement of the optic nerves can only convey impressions of sight, and excitement of the auditory nerve can only convey impressions of sound.

The sensations which attend upon Consumption may therefore, in the first instance, be

divided into two classes, according as they are conveyed by the nerves of common sensation, or by the nerves of special sensation. In the former class are comprised all those sensations which are not conveyed by the well-defined organisms of the five senses, such as the sensations of resistance communicated by the muscular sense, apparently the most universally diffused throughout animal life, which in human communities are agreeably aroused by the numerous Commodities calculated to furnish exercise or to assist repose,—the sensations of temperature, probably the next in extent of diffusion throughout animal life, which are derived from Commodities, adapted to clothe the body, to protect it from the inclemency of the weather, or to produce artificial warmth or coolness, — the sensations consequent upon the gratification of appetite or the alleviation of want conveyed by food of innumerable kinds,—to which may be added the sensations produced by stimulants, so largely used in modern times, as alcohol, tobacco, opium, and the nearly identical elements of theine and caffeine. In the latter class are comprised all the special sensations, whether conveyed

by the natural power of the five senses as originally constituted, or by that after-acquired power which arises from the involuntary education of the senses naturally attending the growth of man or from education, in its general acceptation, communicating to rising generations the knowledge of those who are passing away, and making the senses the avowed ministers of the intellect and of the moral feelings: such are the charms of colour, heightened by beauty of form, and rich with treasured associations, imparted to the eye by objects to which the fine arts have been applied; the pleasures of literature communicated by the sight of conventional symbols; the thrill of each note, the broad expanse of harmony, the running stream of melody, conveyed to the ear by music; the sweet odours imbibed from the essences of costly extracts; the delicate sensation which the axils of the skin convey when placed in contact with finely woven tissues; and the luscious taste which the palate derives from elaborated substances, in which sapid properties are joined with congenial odours, and diffused through substances agreeable to the touch.

The Commodities which serve to excite these two classes of sensations, will naturally be distinguished by a reference to them, and will thus be divided into two classes. These classes of Commodities will be found, probably, to coincide nearly with those which have been usually designated necessities and luxuries, with, perhaps, a somewhat vague reference to certain characteristics which must always have been apparent,—as that necessities are an indispensable preliminary to the enjoyment of luxuries—that any change in the quantity of necessities is more sensibly felt than an equal change in the quantity of luxuries—and that the number of objects comprised under the former head is continually increasing, many commodities which have been regarded as luxuries in rude times becoming necessities as wealth increases and civilization advances,—characteristics, however, which supply no very tangible line of demarcation to enable us to determine what Commodities fall under the respective heads of necessities and of luxuries. When we point to the nerves of common sensation, and to the nerves of special sensation, as supplying this criterion, it will be found




convenient to indicate the classes of Commodities so defined by distinctive names, and we shall accordingly designate them respectively *Primary* and *Secondary* Commodities; Primary Commodities being objects of common sensation, and Secondary Commodities being objects of special sensation. If Commodities are viewed, as they are ultimately viewed by the Political-economist, *in large quantities*, there will probably be found little difficulty in determining to which of these classes * they severally belong, or in what relative proportions they administer to the gratification of each class of sensations. The purpose of our present inquiry leads us now to examine, by the evidence of our own feelings, the changes in the degree and the duration of sensations that are occasioned by changes in the quantity of the Commodities by which they are excited, — to consider at what times and in what degrees Primary

* “The use of classification is to fix attention upon the distinctions which exist among things; and that is the best classification which is founded upon the most important distinctions, whatever may be the facilities which it may afford of ticketing and arranging the different objects which may exist in Nature.” — *J. S. Mill*.

and Secondary Commodities respectively afford satisfaction to ourselves, in order to determine the value that these Commodities may be expected to bear in the estimation of each individual, and ultimately the price for which they will be found to be bought and sold in the dealings of civilized life. This examination will conveniently be divided into two parts, according as the sensations excited by the Commodities are regarded as relative or absolute — as dependent upon the existence of some other than the commodity by which they are immediately excited, or as dependent only on the quantity and quality of that commodity.

(B.) 1st. That necessaries may confer on the consumer their full amount of satisfaction in the absence of luxuries, whilst luxuries cannot be enjoyed by those who want the necessities of life, will be readily admitted. If we express the subject matter of this proposition by the more definite terms, Primary and Secondary Commodities, and test its truth by the experience of our own sensations, the proposition will be found to hold good, that Primary Commodities are essential to the fruition of Secondary Commodities, but that Secondary



Commodities are not essential to the fruition of Primary Commodities. Who would consider it to be a reasonable motive for refusing any gratification which should be within reach of the organs of common sensation that he had not also within reach the pleasures of special sensation? Which of us would refuse to satisfy hunger or thirst, to take exercise or repose, or to procure the consciousness of health, and strength, and comfort, on the ground that no gratification had been previously offered to the five senses? On the other hand, who would prefer, when objects which gratify common sensation have been withheld, to offer to the senses objects designed to produce the pleasures of special sensation? Who, when suffering from hunger or thirst, pinched by cold, oppressed by heat, or pining for exercise, would fully enjoy the charms of the flower-garden, the statue-gallery, or the opera? From our daily experience we all feel that the satisfaction of our less specially organized senses must precede that of those which are more specially organized, although the reverse of this is not the case,—that the blossom cannot live without the stem and the

root, although these may exist without the blossom; and we must be prepared to find, when we shall apply this experience of our own nature to elucidate the nature of others, that no classes of men will appreciate the objects of special sense until they shall have been raised above absolute want,—that the “Ragged Schoolboy” will not be taught until he shall have been fed,—that the poorer grades of society will not appreciate æsthetical or literary pursuits until their condition shall have been rendered comfortable,—and, when our attention shall be directed to the great phenomena of money value, that Secondary Commodities will not be found to command a high price from those amongst whom Primary Commodities are not abundant.


(7.) 2ndly. To turn from the relative effect of Commodities, in producing sensations, to those which are absolute, or dependent only on the quantity of each Commodity, it is but too well known to every condition of men, that the degree of each sensation which is produced, is by no means commensurate with the quantity of the Commodity applied to the senses,—to the rich, that much more than

enough is incapable of affording much more satisfaction, that when the cup of pleasure has been filled it is to no purpose that the stream of Wealth remains unexhausted,—to the poor, that much less than enough produces feelings very different from mere loss of satisfaction. If it be borne in mind that the feeling to which we are here adverting is *sensation*—the first effect of matter on mind, not the complex conception of Value, and still less the ideas of unpriced dignity and power usually associated with the idea of large possessions—it will be quite evident how different are the effects produced on the senses by different quantities of a Commodity. These effects require to be closely observed, because they are the foundation of the changes of money price, which valuable objects command in times of varied scarcity and abundance ; we shall therefore here direct our attention to them for the purpose of ascertaining the nature of the law according to which the sensations that attend on Consumption vary in degree with changes in the quantity of the Commodity consumed.

We may gaze upon an object until we can no longer discern it, listen until we can no

longer hear, smell until the sense of odour is exhausted, taste until the object becomes nauseous, and touch until it becomes painful; we may consume food until we are fully satisfied, and use stimulants until more would cause pain. On the other hand, the same object offered to the special senses for a moderate duration of time, and the same food or stimulants consumed when we are exhausted or weary, may convey much gratification. If the whole quantity of the Commodity consumed during the interval between these two states of sensation, the state of satiety and the state of inanition, be conceived to be divided into a number of equal parts, each marked with its proper degrees of sensation, the question to be determined will be, what relation does the difference in the degrees of the sensation bear to the difference in the quantities of the Commodity?

First, with respect to all Commodities, our feelings show that the degrees of satisfaction do not proceed *pari passu* with the quantities consumed,—they do not advance equally with each instalment of the Commodity offered to the senses, and then suddenly stop,—but dimi-



nish gradually, until they ultimately disappear, and further instalments can produce no further satisfaction. In this progressive scale the increments of sensation resulting from equal increments of the Commodity are obviously less and less at each step,—each degree of sensation is less than the preceding degree. Placing ourselves at that middle point of sensation, the *juste milieu*, the *aurea mediocritas*, the “*αριστον μετρον*” of sages, which is the most usual status of the mass of mankind, and which, therefore, is the best position that can be chosen for measuring deviations from the usual amount, we may say that the law which expresses the relation of degrees of sensation to quantities of Commodities is of this character,—if the average or temperate quantity of Commodities be increased, the satisfaction derived is increased in a less degree, and ultimately ceases to be increased at all; if the average or temperate quantity be diminished, the loss of more and more satisfaction will continually ensue, and the detriment thence arising will ultimately become exceedingly great.

(8.) From this law of the variation of sensations consequences will be found to ensue,

affecting more or less all the problems of Price and of Production; it may be well, therefore, to inquire whether the evidence which this point of our subject supplies will throw any more light on the nature of these phenomena. If, it may be asked, the sensations produced by the consumption of all kinds of Commodities vary according to a law of this description, do they all vary in the same degree?—or, if not, from what cause does their difference of variation arise?—and is it not probably from the same cause which renders most widely different the fruition of different kinds of Commodities, *and which has already enabled us to divide them into distinct classes?*

It is very obvious that the satisfaction which is derived from objects that affect the special senses, is far less dependent on quantity than that which is derived from objects that are productive of satisfaction to our common sensations, or that any change in the quantity of the latter affects the consumer much more nearly than an equal change in the quantity of the former. Whilst food or raiment, shelter or warmth, may be meted out to the human body with the same degree of exact-

ness as to the stall-fed ox, or to the exotic plant, who can mete out to the eye its due amount of visual satisfaction — to the ear its share of agreeable sounds — to the touch, the smell, the taste, their portions of appropriate gratification? And it may be remarked, that whilst the absence of one kind of common sensation can seldom be supplied by another kind, the reverse is the case with the special sensations. A superfluity of repose cannot satisfy hunger, or thirst be quenched by a superfluity of warmth; but one special sense may, and often does, prove a sufficient substitute for others: the Anglo-Saxon may revel in the luxuries of sight alone; the French in the luxuries of the palate; the Italian may live in music; the Oriental in perfume; and the blind, of whatever nation, may find in touch a language, of which they alone know the full expression. The sentient clothing, if it may be so expressed, of special sensation hangs loose, and one object may be easily substituted for another, whilst that of common sensation fits close, and requires to be specifically adjusted. It is evident, therefore, that any change in the quantity of the former

will be less sensibly felt than an equal change in the quantity of the latter; and that to our former expression of the law which governs the general variation of sensations, we may now introduce this modification, that for equal changes in the quantity of Commodities, the change in the amount of satisfaction derived from Primary Commodities is greater than the change in the amount of satisfaction derived from Secondary Commodities.

(9.) We shall here conclude the consideration of such of our sensations as attend upon Consumption. Having arranged them in two great classes, denoted by natural marks, and having traced the causes, and the conditions of mutual dependence of these classes, of their variation in reference to different quantities of Commodities consumed, and of the difference in the degrees according to which they so vary, it may be considered that we have acquired a knowledge of a sufficient number of facts, through the evidence of our feelings, to enable us to determine how far this kind of knowledge can be followed to its ulterior consequences, and be found applicable to the solution of the problems of Political-economy.

To complete our view of the satisfaction derived from Commodities, if Physiology or Psychology were the ultimate object of our inquiries, it would be requisite to proceed to the examination of the changes which sensations naturally undergo as time advances; to the knowledge of the laws of variation in *quantity*, we should require to add a knowledge of the laws of variation in *time*, in order that there might be applied to the elucidation of our subject a knowledge of all the principles by which its conditions are determined. Indispensable, however, for such inquiries, and always interesting as is a knowledge of these changes, they are evidently too minute, in comparison with the means and with the object of Political-economy, to engage the attention of those who investigate this branch of philosophy. The variations in the vividness of sensations, from early youth to the time when life burns dimly in the socket, cannot be brought into calculations of which nations, consisting of numerous individuals of all ages, constitute the subject; the vicissitudes of sleep and activity are insignificant when compared with the periods over which statistical observations are extended;

and still more so are the alternations in the satisfaction of hunger and thirst, and in the exercise and repose either of the limbs or of the more delicate organs, which have found delight in alternations of similar and contrasted sounds and colours, and which might perhaps find a charm in a melodious succession of odours and tastes, if time were to receive adequate consideration, in the preparation of all kinds of Commodities, — these are but as the ripples which undulate on the surface of man's sentient nature, and cannot be allowed to occupy our attention when we attempt to fathom the deep streams of national industry.*

* The few revolutions in the satisfaction derived from Commodities, which are sufficiently long in their periods to influence effectively Price and Production, such as those caused by fashion and change of national taste, are evidently governed by the principles, not of sensation, but of memory and association.

CHAP. II.

The Sensations which accompany Production examined.
—Mental and Physical Labour distinguished.—Effects
of Changes in the existing Quantity of Work.

(10.) “* SENSIBILITY would be a good portress, if she had but one hand ; with her right she opens the door to pleasure, but with her left to pain.” Having investigated the former of these provinces of sensation, and observed whatever appeared to touch most nearly the subject of Political-economy, we may now enter on the consideration of the latter, if, indeed, the toilsome sensations experienced during the performance of productive labour are properly expressed by the word pain. These sensations, conveyed like all others to the sensorium by means of the afferent nerves, are, as we have seen, distinguished from the sensations attendant upon Consumption by this characteristic, that whereas, when Commodities are

* Colton.

consumed, fruition being the object of the action, the agency of the afferent trunks of nerve-fibres is then paramount, and the efferent trunks act in a subsidiary capacity, when Commodities are produced, the agency of the efferent trunks is paramount, and the afferent trunks subserve to indicate the direction and the degree in which muscular contractility ought to be exerted, and to convey those sensations of toil from which the producer would gladly escape, but which are inseparably attached by nature to protracted labour. The sensations thus attendant upon Production, although occupying a subsidiary place compared with those which we examined in the last chapter, will be found to exert very considerable influence on the rate of Production, whilst they are in themselves the phenomena, an exact knowledge of which, in kind and in degree, affords the surest means of alleviating the sufferings of the labouring classes.

How then are we to class the sensations which attend on Production—the feelings which are carried back to the agent by the afferent nerves, whilst he makes the efforts which are intended to produce valuable Com-

modities? What is their character?—do they vary according to the different degrees of effort which the producer is called on to exert?—and, if so, what is the form of this law of variation?

If we were to attempt to answer these questions by adverting to the anatomy of the human frame, it would be at once apparent that, for the purpose of conveying different kinds of toilsome sensation, there exist no distinct organs, specially designed for specific ends, like those which have served us to characterize and to classify the sensations that attend upon Consumption. Our own feelings, and anatomical observation, alike show, that the channels by which the sensations attendant on Labour are conveyed to the sensorium, are not independent organs, but are attached severally to the several organic instruments by which the work is effected. It appears expedient, therefore, to turn at once to these organic instruments, and, after having classified them, to inquire whether the kinds of sensation severally attached to these classes present any important distinctions. The determination of this question must obviously be

decided by direct observation ; but it may be reasonably anticipated that if very considerable differences are found to exist in the nature of the organic instruments by means of which the labours of Production are performed, it will also be found, that there are considerable differences in the nature of the sensations attached to such instruments.

We are thus led to premise some remarks respecting the means which man possesses of acting on matter, in order to classify the reflex effects of matter on man. This digression, however, will be of short continuance, since the marks of classification to which we shall have occasion to refer, we may be satisfied with specifying in this place, reserving the discussion of the characteristics from which they derive their full significance until we reach that part of our subject in which they are seen in operation.

(11.) Head work and hand work, the production of changes of thought and of changes of force, bear distinctive characters which are too familiar to require description. To define, however, the two forms of Labour which produce these two kinds of work requires more

reflection, and is indeed a task which it would probably be found impossible to execute satisfactorily, at least by means of a reference to those palpable marks which Physiology alone can supply, if there were still to be entertained the ancient opinion that the brain is not only the seat of thought, but also the recipient of each sensation, and the *primum mobile* of every action. This opinion, however, will be at once rejected by those who have followed the course of recent discovery. The brain having been progressively stripped, as the history of Physiology shows, of numerous attributes, having ceased to be regarded as the source of vitality, the centre of animal spirits, the sole origin of nervous influence, is now held by general agreement to execute a class of operations far less numerous, but clearly defined; the character of these functions may, perhaps, be most clearly indicated, by briefly describing, in the first instance, those operations of the nervous system which are regarded as being performed without the assistance of the brain.*

A nervous system, in its simplest form,

* Principles of Human Physiology, by Dr. Carpenter.

consists of a series of channels, leading to and from a single ganglionic centre; by means of this simple system, actions are performed, respondent to external or internal impressions, and without any necessary excitement of mental sensations: in a higher form it consists of numerous such series, connected by channels which serve the purpose of mutual correspondence, and aided by others which subserve special organs, evidently designed for special purposes, such as locomotion, respiration, and deglutition; by means of this more complicated system, actions are performed of which the agent is, perhaps, to a certain extent, sensible, but during the performance of which it does not appear to be necessary that he should be guided by a definite intention, or be conscious of an actuating motive. Thus is constituted the whole *nervous circle* of numerous animated beings (*invertebrata*), which, without possessing any brain, properly so called, not only live together in social intercourse, but labour successfully, on what deserve to be denominated works of productive industry.*

* The labour bestowed on the honey-cells of bees, or on the webs of spiders, might be truly considered analo-

Seeing that this class of nervous system is sufficient for the execution of merely mechanical work, we may reasonably inquire whether it be not a fit type of that part of man's nervous system which is engaged with such work. It is obvious that this question cannot be answered until it is known whether, in the human frame, this part of the nervous system is promiscuously and inseparably mixed up with that part which gives to mortal man his pre-eminence over other living creatures, or whether (in accordance with the principle of structure, which is exhibited by other works of Nature, when compared in their different stages as more and less advanced) it is not rather a separate foundation, on which the higher parts, however wonderfully adapted to it, are evidently superimposed, like the parts of an additional structure. Now, when we examine the form in which this lower type

gous to the labour bestowed on many branches of human industry, if we were to regard, according to the principles of sound philosophy, not the work of the insect as evincing remarkable intelligence on its part, but the work of the human labourer as proceeding from little more than simple automatic action.

is exhibited in man, we find that it is, in fact, clearly distinguishable from the brain.* Since, therefore, it appears, that mechanical work may be executed without the intervention of the brain, or by means of that type of nervous system of which the brain does not form a constituent, and since the part of man's nervous system, which is represented by this type, may be readily distinguished from the superior portion, we may denote this class of work by referring it to the acephalous portion of the nervous system, as it exists in man. The class of work thus denoted may be denominated *physical* work. When, added to this

* That the fact of man being comprised in the order of vertebrate animals, in consequence of his osseous structure, is not incompatible with the distinct existence of the lower type of nervous system now under consideration, is proved by the curious fact, that in the lowest known vertebrate animal (the amphioxus) it is found alone, without a trace of the rudiment of either a cerebrum or a cerebellum. All argument, however, on this subject is rendered needless by the well-known cases of infants, who, having been born without either of these appendages, have lived for several days, breathing, sucking, swallowing, and performing other automatic actions.

cranio-spinal axis*, a structure of a higher degree of complexity, composed also of nervous matter, but with its vesicular portion placed on the outer instead of the inner surface,—when the cerebrum and the cerebellum are seen in their full development superimposed on the sensorium,—there is recognised by universal assent an organ of superior endowments, the seat of thought, and the instrument of intellectual performance, the productions of which cannot be supplied by the efforts of animated beings inferior to man, nor by mechanical contrivances, but must for ever stand alone as the work of the human mind. No argument, therefore, is needed to prove that this class of work may be specially denoted by a reference to the cerebral hemispheres; when thus denoted we shall hereafter speak of it by the appellation of *mental* work.

(12.) Having thus found that human work is capable of division into two great classes, physical work and mental work, each specially marked by the organ which is principally in-

* Consisting of the spinal cord, the medulla oblongata, and the sensory ganglia.

strumental in its performance, we may now revert to the main subject of the present chapter, and inquire with what *sensations* each of these classes of work is attended,—what is the nature of the toilsome feelings that arise during the execution of each kind of work,—how far are they dependent on the quantity of work performed, and in what degree, and with what respective differences, are they so dependent?

It is manifest that a certain number of the actions of productive industry do not fall within the scope of this part of our inquiry, being performed without the excitement of any palpable amount of conscious sensation, or of sensation that can be properly designated toilsome. The “phenomena of reflex action (now universally recognised by physiologists), in which impressions made upon the nervous system are followed by respondent automatic movements,” such as the movements of the pupil of the eye and of the eyelid, of breathing, of swallowing, and the like, are scarcely attended with less effort than some actions for which large sums of money are received. The gifts of Nature, which are displayed with

little more than a tacit assent of the will,—the notes of *her* voice, the bound of *her* foot, the touch of *her* pencil, whom the academy delights to honour, the revelation of a happy thought, of a bright idea, of a brilliant discovery,—these and similar actions, which command a high pecuniary equivalent, would generally be performed without the prospect of any such recompense, from a love of display, or from the sense of pleasure which Nature has attached to the exercise of every surpassing faculty. Actions, therefore, of this character, however much they may influence the sensations which attend upon Consumption, do not fall within the scope of an examination of the toilsome sensations which attend upon Production.

The great majority, however, of the actions of Production are, as is but too well known, attended with sensations that are not unfelt by, nor are indifferent to, the producer—sensations such as human nature would willingly escape from if it were possible, but which are so inseparably attached to continued exertion, that, without conceiving them to be present, no adequate notion of Labour can be formed,

and which are still more severely felt than the natural condition of man would indicate, in consequence of the division of Labour, requiring exclusively from a single organ of the body the exertion that would otherwise be divided amongst several, and thus entailing upon each branch of productive industry its characteristic malady. These toilsome sensations evidently accompany in the great majority of cases the execution of the two classes of work which we have designated physical work and mental work. Let any muscular effort be made, as, for example, let the arm be extended in a horizontal direction, and be held there, counteracting the force of gravitation: the first sensations may be the indifferent, or perhaps agreeable sensations of activity and of power, arising from the exercise of the muscular sense; but the sensations which succeed assume a different complexion, and progressively merge into sensations of resistance, of a necessity for effort, of a consciousness of a force equal or superior to our own, and ultimately of a painful reluctance to persist: such are the class of sensations which may be distinguished as the sensations of Physical

Labour. Again, let the brain be exerted to perform any mental work, as, for example, to cast up long and complicated accounts; the feeling first experienced may be the pleasure of occupation, of the employment of previously acquired knowledge, of surmounting difficulties; but if the undertaking be persevered in, and we attempt continuously to overcome the feeling of resistance (if this word may be used to indicate a sensation which we all feel to be very similar to the resistance felt during Physical Labour, and which Physiology sanctions by the observation that cerebral movements accompany efforts of thought), sensations will arise which, if it were possible, we should willingly shake off. These accompaniments of our toilsome thoughts, by whatever names they are denoted in their several degrees, as weariness, exhaustion, and the like, but better known by experience than by name, we may distinguish as the sensations of Mental Labour.

(13.) When there are performed productive actions the performance of which is not indifferent to the producer, but which is attended with sensations that constitute it,

in the proper sense of the term, Mental or Physical Labour, how far are these sensations dependent on the quantity of exertion — in what different degrees are they felt when the work is performed in quantities of various amount?

If we turn our attention, in the first instance, to the point at which *action* becomes *labour*,—when the feeling of pleasure, consequent upon the exercise of our faculties, becomes merged in a feeling to which we are averse,—when the honey at the brim has been sipped, and the bitter draught, which has been forced on the great majority of mankind, in all ages and countries, is just tasted,—or, to use the more defined language requisite for our purpose, when the agency of the efferent nerves begins to be in the ascendant,—it will be quite evident that this state of feeling would not continue if the work should be continued, but that, on the contrary, the degree of the toilsome sensation would increase, and would become insupportable, if the work should be protracted indefinitely: the labourer would sink from exhaustion, not after numerous years of work, when the amount produced might be supposed to bear

some comparison with the degree of toilsome sensation endured, but in a few weeks or days, when the amount of production would not be immoderately greater than that which would have resulted from more moderate labour during the same period.

Between these two points, the point of incipient effort and the point of painful suffering, it is quite evident that the degree of toilsome sensations endured does not vary directly as the quantity of work performed, but increases much more rapidly, like the resistance offered by an opposing medium to the velocity of a moving body.

When this observation comes to be applied to the toilsome sensations endured by the working classes, it will be found convenient to fix on a middle point, the average amount of toilsome sensation attending the average amount of labour, and to measure from this point the degrees of variation. If, for the sake of illustration, this average amount be assumed to be of ten hours' duration, it would follow that, if at any period the amount were to be supposed to be reduced to five hours, the sensations of Labour would be found, at least by

the majority of mankind, to be almost merged in the pleasures of occupation and exercise, whilst the amount of work performed would only be diminished by one half; if, on the contrary, the amount were to be supposed to be increased to twenty hours, the quantity of work produced would only be doubled, whilst the amount of toilsome suffering would become insupportable. Thus, if the quantity produced, greater or less than the average quantity, were to be divided into any number of parts of equal magnitude, the amount of toilsome sensation attending each succeeding increment would be found greater than that which would attend the increment preceding, and the amount of toilsome sensation attending each succeeding decrement would be found less than that which would attend the decrement preceding.

(14.) In order to acquire a further insight into the nature of this law of variation, we may again appeal to the manifestations of our own feelings, and ask whether it governs all our toilsome sensations alike, or whether important distinctions do not exist between the two classes which respectively accom-

pany Mental and Physical Labour. If mental exertions and physical exertions be made, and strenuously persisted in for a length of time, do we perceive any difference in the manner in which they are respectively met by counteracting sensations ?

That Physical Labour has its proper period of duration, most definitively marked by feelings, intelligible alike to the human producer and to the brute creation, we shall all be ready to admit, but few perhaps are accustomed to reflect how indefinite, in comparison, are the feelings which inform us that the brain has performed its due amount of work. Whilst it is familiar to all that if inordinate exertion be persisted in, the arm, the hand, the finger, will become for a time paralysed, the leg will refuse its office, and the muscular frame will discontinue its efforts, or seek repose in sleep, it is, perhaps, the student alone who is fully conscious with how little of actual sensation Mental Labour may be persisted in, and how often, even after sleep has supervened, ideas not less original, and conclusions not less true, may be formed, than during the hours devoted to study. It is, indeed, the absence of that

best of monitors, pain, that tempts the inconsiderate to be so often the willing victims of mental labour*,—that makes the successful candidates for professional distinction at the bar, and in medicine, and for eminence in philosophy, and the fine arts, endure a degree of toil from which the artizan or the mechanic would shrink. Legislators who, by compulsory enactments, limit the duration of factory labour to ten hours, whilst they themselves voluntarily extend their own hours of toil over a much larger space of time, afford a passing example of the difference between the two classes of sensations, which respectively oppose the progress of physical and of mental production, when circumstances induce the performance of an immoderate amount of work. It may be further observed, that as the increase of Mental Labour is attended with comparatively little increase of toilsome sensations, so

* It is well known that the brain, when handled, has very little feeling. How far the difference between this low degree of sensibility and the sensitiveness of a nerve, when laid open, indicates the difference between the sensations attached to Mental and to Physical Labour, it may be reasonable to conjecture.

also any diminution in the duration of Mental Labour is attended with comparatively little change of sensation. The sudden feeling of ease, of relief, of rest, which follows the cessation of long-continued physical efforts, we are scarcely conscious of when we cease from intellectual efforts. So little, indeed, is this cessation often coveted, that the most laborious investigations, and the most highly finished compositions, have probably resulted from little more than the indulgence of natural intellectual activity.

- If, then, we may trust to the evidence of our own feelings, we may conclude that the changes in the toilsome sense of resistance conveyed by the fibres of the cerebral hemispheres, and by the other parts of the nervous system, are, as might have been expected, very different in degree. It is easy to perceive how the rate of velocity, with which different Commodities are produced, is affected by this difference in the resistance offered by sensations to Mental and to Physical Labour.

CHAP. III.

The natural Order of Mental Inquiry.—Law of the Intensity and of the Duration of Actions—Applied to the Actions which constitute Production, Distribution, and Consumption.

(15.) HAVING now collected, on the borders of Physiology and of Psychology, such initiatory truths as appear to be applicable to the elucidation of the events which occupy the attention of Political-economists, we shall pass on to that higher stage of mental inquiry which is usually designated internal, because its phenomena are immediately *preceded*, not like those which we have just left, by changes external to the mind, and occurring either in the body or in the outer world, but by changes occurring in the mind, whether sensations, ideas, or emotions. Whilst surveying these internal states of mind, we shall find that the sensations which we have examined, are remembered in their various degrees of intensity, and in their opposite qualities, as satisfactory or toilsome, in con-

junction with the objects and with the actions which they have invariably accompanied, and, becoming thus mentally combined with them, invest them ultimately in the mind with that attribute of Value in respect of which they are balanced by the judgment, and are selected by the will, and become the efficient motives of the actions of Consumption, of Distribution, and of Production.

Memory, the lowest, as it may be termed, of these purely mental functions, since it is undoubtedly shared with man by some of the lower members of the animal kingdom, causes, it is needless to say, the sensations which are attached to the fruition of such objects, and to the performance of such actions as we have been engaged in considering, to be remembered by the consumer and by the producer. That every sensation, once felt, causes a lasting impression on the mind, there is much reason to believe, although perhaps there is nothing in the nature of present feeling incompatible with future obliviousness; whilst the mind might possibly have been so constituted, that its impressions should vanish like the "waves of shadow which pass over the corn," there is

much reason to ascribe to it that character which philosophy ascribes to material nature, of retaining perpetual traces of every external impression. It is quite needless, however, to claim for memory this degree of retentiveness, in order to prove that with which alone we are concerned here,—that there is retained in each human mind a continual remembrance of such of its past pleasures and pains as will probably recur in the future, and amongst these of the sweets of enjoyment, and of the toil of labour, with the character of every object and of every form of action that have been experienced to be their proximate or remote causes.

(16.) When we go beyond the phenomena of simple memory, and observe that the impressions of past events are not only retained in the mind, but, being so retained, are manifestly subject to certain definite principles of attraction or association, and are in certain cases indissolubly combined together, and become the efficient causes of long continued lines of conduct,—that the mind is a deep which is not only not trackless, but which gives birth to new forms related by certain ties of affinity,—

we enter on a subject which, if not more wonderful, is probably less familiarly known, and for a right understanding of which, the evidence of our personal feelings requires to be guided by the wide experience of Psychology. Without entering on the vexed questions of metaphysics, or referring to principles which an unprejudiced inquirer can reasonably doubt, it will still be necessary to trace the effect of the sensations which we have examined, through a part of this field of mental inquiry, before we can fully discern their influence on the great phenomena of Political-economy.

The first and the most important step in this, and, indeed, in every discussion concerning the nature of ideas, is to decide how the investigation is to be conducted,—into what divisions the subject naturally falls,—and especially in what order these divisions are to be severally brought under notice. If these natural divisions are found to rise in degrees of complexity, the more complicated being governed by the same laws which govern the more simple with the addition of other laws, it is manifest that no researches can be rightly conducted which do not approach the divisions

successively in this order, tracing the effect of each law in the field in which it alone is unknown, and always subduing one class of difficulties before another is added to them. As this important consideration does not appear to have been pointed out by any writer on Psychology, a few remarks may be premised to justify the order in which the steps of the subject are here placed, different, as it is believed to be, from any that has been yet adopted.

The internal phenomena of mind may be conveniently divided into three classes: the first comprising those properties of our ideas in consequence of which they cause actions, commonly known as the emotive faculties; the second, those properties through which they call up or suggest each other, known as the principles of association or suggestion; the third, which may be called the principles of combination, comprising those properties in consequence of which two or more ideas become inseparably combined, and grow by a process of continual accretion, and ultimately become so transformed as to assume an allotropic character, and to produce effects differ-

ent from or opposite to the effects of the original Ideas. To illustrate this classification of mental phenomena by analogous phenomena occurring in the world of matter, the first class may be compared to the effects of moving force; the second to the attraction of gravitation, or cohesion; the third to the effects of chemical affinity, and of those laws which govern the successive stages of organic life.

The Emotive Faculties may evidently be seen in operation in fields of observation, in which neither the laws of Association nor of Combination operate. Thus the infant, and, in a more remarkable degree, some of the inferior animals, immediately after birth, perform actions which can neither be considered to be the result of chance, nor to be occasioned by any object contemplated in the mind, but which are manifestly governed by certain intuitive principles; and several of the actions of advanced life, as we shall presently have occasion to point out, are performed in the same manner, without the active intervention of any higher power of the mind. As the most simple, therefore, of these

three classes of phenomena — not as the most easily intelligible, for, in truth, they are the most abstract, but as acting alone, and as capable of being observed when so acting—the Emotive Faculties naturally stand first for examination.

The next place must evidently be occupied by the phenomena of Mental Association. The very young children, and the numerous vertebrated animals, that continue to ascribe to objects the qualities which past experience has shown them to possess, exhibit no traces of the operation of any other mental powers except those of Mental Association and of the Emotive Faculties.

The third in succession stand those phenomena of Mental Combination which are only to be observed in minds in which the two former classes also have a place, and which therefore can never be profitably investigated until *their* conditions shall have been determined. It is in the minds of the adult only that there occur the amalgamations and transformations, the secondary conceptions, and the secondary emotions, that so strangely elevate or degrade the moral dignity of man.

For these reasons the laws which govern the internal phenomena of mind will be rightly examined in the following order:—Firstly, the Emotive Faculties ; — Secondly, the principles of Mental Association ;—Thirdly, the principles of Mental Combination : and if this order be not observed, the right understanding of them will be impeded by great, and perhaps by insurmountable obstacles.

(17.) It is scarcely necessary to premise, with respect to all these phenomena, that the subject which we have to examine is the operation of *natural laws*, acting in this, as in the subject of every other science, definitively and invariably. Man has very frequently the power, in the exercise of free will, to regulate the conditions under which these natural laws shall operate, but this power evidently leaves their nature intact,—it no more affects their independence as natural principles when they happen to be laws of mind, than his power to decide what food his digestive organs shall act upon, or what crops shall grow on his land, affects the independence of the laws of organic chemistry. The exercise of free will on the mind, the deliberate selection of one mental

law to operate, and of the conditions under which it shall operate—an event which probably occurs much less frequently than is commonly supposed—in no way prejudices its title to the character of an immutable law of Nature.

What laws of Nature are, it is happily no longer necessary to inquire. That truth will be always found stranger than fiction—that a knowledge of immediate and invariable sequences of events will alike confer the greatest power, and excite, in those to whom they are new, the most lively surprise, will now be generally anticipated,—whether in the changes of sensation, that constitute the first truths of Psychology, and excite constant surprise in the infant mind,—in the changes of motion, which constitute the first truths of Dynamics, and which supply childhood with perpetual novelty,—in the first truths of chemistry, which often furnish the toys of a maturer age,—or in any other province of naked truth. Whilst the gratification thus arising from elementary laws of Nature, not less probably than a desire of power, induced the philosophers of the last century to imagine the

universal existence of unknown causes, and the schoolmen of an earlier age to speak of these phantoms under the name of powers, and the still earlier inquirers, by whom the great origin of all creation had been forgotten, to invest these imagined powers with life and superhuman excellence, to dedicate temples to them, and to worship their divinity; in the present age it may be confidently anticipated, that the strangeness of a sequence of events will not be regarded as fatal to its claim to rank as a law of Nature, but that—whether we examine the effect of matter on matter, the subject of physical science, or the effect of matter on mind, which we have already had occasion to investigate, or the effect of one state of mind on another state of mind, or the effect of mind on matter, the subjects which will now claim our attention, — no intervening causes will be supposed to exist where the connection of events as invariably and unconditionally antecedent and consequent has been ascertained, and that, in all cases, the discovery of such causes will only be considered desirable, so far as they shall serve to establish that which it is the highest

ambition of philosophy to demonstrate — the existence of unconditional sequences of phenomena occurring in known quantities, after known intervals of time.

(18.) To commence with the consideration of the natural laws which govern the Emotive Phenomena of mind, Political-economy requires to be informed how the operations of productive industry are carried forward, and in order to be able to measure the quantities produced, and the degrees of velocity with which they are produced, requires this information to be of the most precise and definite character that it is possible to obtain. How, then, is the nature of these actions illustrated by the philosophy of the human mind? Having seen that these operations are distinctly marked by the parts of the human organism that are most instrumental in their performance, we have now to inquire, what is the *modus operandi* of the mental influence which actuates these organic instruments? — not, what is the nature of these organic instruments? for that is a question for Physiology, — nor, what is the *primum mobile* that causes the performance of these actions? for the nature of motives

belongs to a more advanced stage of our inquiry,—but supposing the organism to be understood, and the motive to exist, in what manner, with what energy, with what stability or variation, with what necessity for referring to the conscious will, are these actions performed? — not, what is the spring of the mechanism, nor how is it put together, but what are the abstract principles in obedience to which it works?

These questions will be most readily answered, like other problems of abstract science, by dividing the subject into two parts, distinguished as involving, or as not involving, the consideration of *time*—as exhibiting either contemporaneous phenomena, only offering for determination relations of *quantity*, or as exhibiting the same phenomena at different epochs, only offering for determination the *rate* at which their changes have been effected. Of these divisions the former may be expected to receive some light at least from an examination of the nature of individual man, whilst the latter can, perhaps, only be satisfactorily determined after statistical returns of the actions of nations shall have been examined;

the one resembling the laws of Statics, which can be determined by an examination of terrestrial phenomena, the other the laws of Dynamics, which are most clearly exhibited by the distant bodies that move through the heavens.

What, then, to commence with the former of these branches of our inquiry, are the powers of the human mind by which the great operations of Political-economy are actuated?—what is their manner of causing action?—are they inert during the *absence of mind* of the agent, or do they ever operate without his attention, and even without his consciousness? If this latter be the proper view of their nature, it will be readily conceded that they are governed by natural laws which are permanent and invariable,—that activity, and not inaction, is the natural condition of their functions,—and that the phenomena of Political-economy, which are their consequences, will be found to recur, ever and unceasingly, as the same Sensations, Ideas, and Emotions, recur in the mind of each individual, or of his successors in the tide of population.

Now it has been established, by the evidence

of both Physiology and Psychology, that actions can be, and frequently are, performed without the attention, or the intention, or even the excitement of consciousness in the mind of the agent, being the simply automatic or instinctive effects of either Sensations, Ideas, or Emotions; and, in order to distinguish to which of these states of mind such actions are simply reflex, they have been respectively designated sensori-motor, ideo-motor, and emotional.* As some actions of the human body (the excito-motor) are respondent to mere excitation, like the movements of the leaves of the sensitive plant, — as, for instance, the application of galvanism to the limbs, even after they have been severed from the body, may cause muscular movements, or as simple touch may in certain cases cause the limbs to be moved involuntarily and even unconsciously, or as many of the actions which modify the process of digestion, and others which are necessary for the support of life, are performed, whether in sleep or otherwise, by the reflex activity of the organ in the absence of any

* Principles of Human Physiology, by Dr. Carpenter.

mental sensation,—so other actions are respondent to *mental* causes, although these are unnoticed or unobserved. A variety of experiments must obviously be requisite to prove that any mental state is the efficient cause of any bodily action, and we can here only refer to the evidence of Comparative Anatomy, of Pathological Observation, and of Psychological Reflection, by which the following facts have been established. If certain *sensations* be excited, certain actions may be caused by them without the intention or the consciousness of the individual. The efforts which the infant makes to find the nipple with its lips, the acts of yawning, starting, sneezing, laughing, closing the eyes when exposed to a sudden glare, and many series of actions performed whilst the individual is engaged in earnest thought or engaged in conversation, as those of walking, writing, eating, and performing some kinds of mechanical work, may be readily recognised as falling under this description.*

If, again, certain *Ideas* occupy the mind,

* It may be remarked, that it is probably by means of this *Sensori-motor* influence alone, that all the actions of the industrious tribes of insects are performed.

certain purely reflex actions may be immediately caused by them, and may be thus unconsciously, or even unwillingly, performed ; such are several of the actions which are well known to have been performed during reverie or abstraction,—those which constitute somnambulism,—and those which are familiarly known to experimental psychologists as table-turning, time-striking, and the popular results of misnamed Electro-biology,—to which may be added the innumerable actions which are the effect of permissive ideo-imitation, or of the natural tendency of the limbs, when unchecked, to imitate movements that are conceived in the mind, as may be witnessed in the sports of childhood, and in the gesticulations of untutored eloquence.

If, lastly, an *Emotion* occupy the mind, its appropriate bodily action will naturally ensue. As Fear affects the pulsations of the heart and moistens the skin, and Horror makes the hair stand on end—as the eye of Melancholy is leaden, of Anger is on fire, of Pity “drops the softly pleasing tear”—as Envy is wan, Care is pale, Shame “mantles the cheek and skulks behind,” and Joy calls forth “Laughter hold-

ing both his sides,"—so, when a desire is entertained to move the limbs, the movement naturally follows*; the action is preconceived as desirable, and it is consequently performed†, sometimes without the excitement of consciousness, and sometimes even in opposition to the will.

The laws, then, of human action are, in the same sense in which other laws of Nature are so, fixed and invariable,—the conditions under which they operate are undoubtedly subject to the interposition of the human will, but their results are, in the absence of such interposi-

* Any illustration of the self-existence of emotional actions, if it could ever have been needed, is now rendered unnecessary by the physiological researches which have shown that the antagonism between Volition and Emotion, which all have felt internally, can be traced by anatomy. When it is proved that emotional action operates in one of two ways, either downwards directly upon the muscular apparatus, or upwards directly upon the brain (in which case it gives rise to various modifications of thought, before it is allowed to reach the muscular apparatus), it becomes evident that it is the choice of these two routes, or rather the latter, that determines the subjection of our animal to our mental nature, or is the end and aim of moral teaching, and that, in the absence of such selection, one of these forms of action ensues automatically.

† Vide Brown on Cause and Effect.

tion, certain, and therefore subject to prevision where sufficient knowledge has been attained to determine the existing conditions of phenomena, and to trace their consequences. Of all the direct connections of cause and effect, this, perhaps, appears the most paradoxical—that our own organs should ever without our consciousness minister, like fairy hands, to our Desires, and even to our Ideas and our Sensations; but this fact is established by evidence scarcely less controvertible than that by which any other known cases of inviolable causation are established. Human Sensations and Ideas might have been denominated by the Greek sage, not less aptly than human Emotions, the horses which draw the chariot, or, since the horses of Apollo have given way to the Newtonian theory, the influence of all may now be alike compared to the moving force of gravitation.

(19.) To apply a knowledge of these principles to the elucidation of the great courses of action, which form the subject of Political-economy, — since they *naturally* follow the occurrence of certain states of mind, and only meet with occasional disturbances from the

intervention of the will, it is the determination of these states of mind that must determine the direction and the energy of these actions. The natural law, then, by which these actions are governed is this—each course of action varies as the state of mind producing it. When this conclusion has become evident, the mystery of action is solved, the necessity for observing a confused multitude of movements is at an end, and predictions of the future course of Production, of Interchange, and of Consumption, cease to be empirical, since it is now only necessary to determine their causes, and to deduce from them their natural consequences.

The manner in which these abstract principles govern the several concrete actions of Consumption and of Production, it may be necessary briefly to indicate, whilst the actions of Interchange, deriving their whole significance from the mental processes of Comparison and of Judgment, which precede them, may require no further notice. The actions which minister to Consumption, during which, as we have seen, the functions of the afferent nerves are paramount, and the efferent nerves may

officiate, in a great degree, without the attention of the individual, are easily understood, — the manner in which Commodities are brought within the reach of the senses, the actions which are performed in consuming them, whether they be the objects of general Sensation which we have called Primary Commodities, or Secondary Commodities, the objects of special Sensation, such as the actions of sitting and of lying down to rest, of putting on raiment, of eating, and drinking and the like, or the actions which administer to the pleasures of the five senses, such as the movements of the tongue and of the palate necessary to gratify the taste, the gentle and equable motion that arouses the touch, the inhalation of sweet odours, the strokes on the drum of the ear, constant, and ever significant, the movements of the muscles of the eye, and the dilation and contraction of the pupil, by which the pleasures of sight are derived from objects in various lights and at various distances, — these, and the similar actions which are performed during the processes of Consumption, will readily occur to every inquirer as exponents of the laws of Nature which we have

been considering. In the various processes of Production their operation may, perhaps, be less readily perceived, in consequence of natural feelings which it is difficult to shake off, and which usually induce men to speak of their feats of industry as kings and conquerors speak of their victories, as having been achieved *by themselves*, in gratifying oblivion of all that intermediate agency has effected for them. If, however, we fully realise that *natural connection* of certain states of mind and certain actions, as cause and effect, which we have been engaged in considering, we may easily perceive how the great operations of Production are carried forward. If there be entertained a desire to perform one of those operations which we have distinguished as the work of that type of nervous system, of which the brain is not a constituent,—if a desire be entertained to perform any branch of Physical Labour,—the initiatory contraction of the muscles naturally ensues, and as, by the laws of Association, which we are hereafter to examine, habitual Ideas and Sensations follow, respondent to each ensue the appropriate actions of all the mem-

bers of the body, in their various degrees of force and quickness, of bodily strength and manual dexterity, resulting in the innumerable products of manufactures and of commerce, which are due to this department of industrial labour. Or, if it be desired to execute a work requiring Mental Labour, with the aid of that crowning capital of the nervous system which supports the intellectual supremacy of man, whether the object be cursory, — as to solve a problem, to form a judgment, to analyze an expression, — or an intellectual undertaking which can only be achieved by a succession of mental operations, as analysis, and abstraction, and comparison, and classification, and composition, — the desire is followed by the commencement of the work, and by its prosecution with more or less of success: the form of the proposed object rises indistinctly, as in a mist, from the sea of thoughts, and suggests and controls every Idea that can administer to its development; the absence of external Sensations is desired, and the river of oblivion is instantly passed, whilst the plan of the edifice is designed within the shades of the mind: the Idea of the whole

work suggests the Idea of its parts; their presence is desired and they appear; it is desired to mould and fashion them, and they assume a definite appearance—to decorate them with the charms of form and colour, and they become so adorned—to observe them through the achromatic medium of taste, and they become chastened—to compound the whole, and each part falls into its proper place, and the intellectual edifice at length rises, scarcely betraying the labour that has been bestowed on it, as a coral reef above the ocean,—a series of conceptions that, with a slight effort of Physical Labour, may be embodied in a statue, or a painting, or a pile of building, or may be expressed in the language of music or poetry, or be uttered in the words of an oration that may fly forth winged, and produce an indelible impression on the hearts of the hearers, and a momentous change in the laws of a country, if it be not also caught by the hand of the ready writer, and become embalmed amongst the treasures of national eloquence.

(20.) We may now examine the second part of this subject, in which the actions thus

caused by certain states of mind are no longer to be regarded as instantaneous, but as enduring through long spaces of time, and in examining which our object must be to ascertain whether, from their own nature, any, and what, changes occur in them in consequence of the lapse of time. We have seen how the dynamical phenomena of Political-economy are caused, and how they vary with the variations of their causes, we have now to inquire what effect is produced by the progress of time on these phenomena. Does the course of action produced by Sensations or Ideas, or Emotions naturally cease?—or, if it be continuous, is it uniformly exerted? Until these questions shall have been answered, it is evident that no data will exist for determining, otherwise than empirically, what will be the rate of Consumption and of Production, after any given space of time shall have elapsed.

The actions of each individual are, it is quite evident, continually disturbed or interrupted by *external causes*, as time glides on. Of the disturbing causes which thus affect the actions of Consumption, we may instance the alternations of hunger and of thirst, as

among the most conspicuous; and of those which affect the actions of Production, we may specify the alternations of day and night, and of the seasons of the year, and the transition from youth to age. From a field of observation, in which actions can only thus be seen under circumstances the most unfavourable for the purposes of our examination, it is not probable that any evidence will ever be collected capable of furnishing a conclusive answer to the abstract question which we are here called on to consider. It might, perhaps, be surmised, that as human action produces, or resists, mechanical force, makes durable impressions on matter, or causes motion, in its nature continuous and uniform, it would also endure without change, until some assignable causes of change should occur, or that no action would be suspended but in consequence of an efficient cause,—an opinion which many curious pathological facts might serve to confirm. And as the Sensations, Ideas, and Emotions that are connected with the enjoyment derived from the objects which constitute exchangeable Property, or with the necessity of producing them, occupy, as we shall hereafter have

occasion to observe, the largest part of the thoughts of the largest members of individuals in every civilized community, it might be surmised that the actions of Consumption and of Production would stand forth prominently, when large masses of population of each sex, and of every age, should be observed collectively, undisturbed by the numerous causes which affect thoughts and actions of lesser frequency or magnitude, and exhibiting ceaseless continuity, and an uniform rate of occurrence.

It is useless, however, to have recourse to this abstract and difficult course of reasoning, when we have the power of observing directly the movements of political bodies. The more distant objects are, the more free are they usually found to be from the influence of disturbing causes, and the greater advantage, consequently, in examining them is enjoyed by the observer, provided they can be clearly perceived; such is the case with human nature as seen in statistical returns. Without anticipating in this place our discussion of political phenomena, we may close this part of our

inquiry by adverting to the fact, that, when thus examined, the actions of Consumption, of Production, and of Distribution are found to be equably performed, so long as no assignable cause occurs to disturb them. In any number of succeeding years (after the changes of population and the effects of physical causes have been brought into calculation), so nearly the same amount of food, fuel, raiment, and other perishable articles are found to be consumed, the same quantity of manufactures to be produced, and the same average rate of prices to be maintained, that if there be any deviation, the statist ascribes it, with the utmost confidence, to the intervention of some disturbing cause. Unregarded, or rather unexamined, as this law has hitherto been allowed to pass, its influence affects every dynamical question of Political-economy. It is indeed the universal occurrence of the effects of this law, that, on the one hand, has occasioned it to be tacitly assumed, and its operation to be passed over in silence, as if familiarly understood, and that, on the other hand, has induced some, who have objected to assume, and have omitted to examine it, to feel insuperable re-

pugnance to the whole teaching of this branch of political philosophy.

A wider view, extending almost beyond the range of the Politician, and more properly belonging to the province of the Historian, may possibly show that this law of the uniform continuance of the great actions of Political-economy is subject to the influence of other laws of still wider jurisdiction. It may appear, as some have thought, that the energy of human action moves in a slow revolution round our globe, — that the natural course of human activity may be traced, advancing from East to West, and from South to North, over a path determined by the position of the magnetic pole, and that there may thus be witnessed, in the vast fields of History and of Physical Geography, that co-existence of the phenomena of human action and of electromagnetic currents which are apparent to every observer of the nervous system. Or it may be thought that by the original constitution of the human mind, and by the natural position of man with respect to the external world, every subject of investigation passes successively through certain stages of belief,

the superstitious, the metaphysical, and the physical, and that the sentiments connected with these subjects are consequently entertained in this order, each arousing, at its appointed time, the branches of active Industry devoted to its gratification. Of these, and similar conjectural cycles, it may be sufficient to observe that, should it ever be proved that there is excited in nations, after assignable periods of time, an unusual degree of activity in the Consumption, the Distribution, or the Production of intellectual or of material Wealth,—that there are periodical revolutions in the various forms of national energy, which distinctly mark the age of a people, as of Pericles or as Augustan, as a Renaissance or as Elizabethan, such a law of Nature would derservedly engage the attention of this and every other branch of Political Philosophy.

CHAP. IV.

The Principles of Mental Association. — Application of these Principles to classify Industrial Occupations and Professions.

(21.) THE Association of Ideas, or the laws which determine the sequences of our thoughts, form the subject which, as we have seen, ought to occupy the second place in every investigation of the internal phenomena of mind according to their natural order, and constitutes, therefore, the field in which we must next enter, to search for such of the principles of human nature as will serve to elucidate the phenomena of Political-economy. What is the influence of these laws on the actions which constitute Consumption, Production, and Interchange will appear from this consideration, that if these laws could be supposed to be abrogated, the Ideas passing through each human mind would become totally unconnected ; all external actions would

become inconsequent; and in the place of the admirable succession and subordination of actions by which the various processes of industry and of enjoyment are carried on, each human organ, as a Sensation or an Idea might chance to enter the mind, would spring into attitudes, or pursue courses of action, more incongruous than any that are exhibited by the most unfortunate victims of mental imbecility.

Essential, however, as a knowledge of this part of the philosophy of the human mind is to a right understanding of Political-economy, this knowledge is now so widely diffused, that no further remarks will be required in this place than are sufficient to show how it can be applied to the elucidation of our subject; and for this purpose it will be sufficient to point out how it serves to furnish natural marks of classification which, in the future growth of the science, may perhaps be found better adapted than any others to denote the classes of an industrial population.

It is obvious that one Sensation cannot be immediately caused by another Sensation, because these states of mind are marked, by their

definition, as immediately caused by the contact of external objects with the organs of sense. When, however, the avenues of Sensation are free from the intrusion of external objects, as during our night thoughts or day dreams, and Ideas are naturally succeeded by Ideas, continually passing before the consciousness in every variety of mental imagery, if these natural successions of Ideas are closely observed, and, especially, if such of them as occur the most frequently are scrutinized, the same order of succession, repeatedly occurring, unequivocally indicates that certain amongst them are naturally connected together, or that there exist among the occupants of this ideal world certain definite bonds of causal relation. It may be added, that this natural succession of Ideas which we observed in our own minds, we intuitively attribute to others, and to characterize their thoughts as incoherent, or unconnected, is understood by common consent to question the soundness of their understanding. The causes of this natural association of Ideas have been classed, as is well known, under two heads, which may be described as the circumstance of the Ideas

having previously entered the mind together, — a circumstance which, having occurred on one or more occasions, tends at any subsequent period, when one of such Ideas has chanced to enter the mind, to cause the appearance of the other, — and, as the circumstance of the Ideas being naturally similar or contrasted, which, without any previous companionship, tends to cause the appearance of one to be followed by the appearance of the other. The former of these principles, — that which connects thoughts that have been previously entertained together at nearly the same time, or in nearly the same place, — is familiarly known to psychologists as the *Law of former Co-existence* ; the latter connecting thoughts that are remarkably alike or contrasted, as the *Law of Resemblance*.

Whether these be in truth, as they have been usually considered to be, primary and fundamental principles of the human mind, or whether they be not rather the natural consequence of that connection between certain states of mind and actions, whether mental or physical, which we have been engaged in examining, it is not the province of Political-

economy to inquire; but it may be remarked, in this place, that when the fact has been recognized, that our desires have the power of bringing before the mind those Ideas, the presence of which is desired, and it is found that the Ideas which are naturally brought before the mind by the Laws of Association are bound by the same ties as the objects, the connection of which is most attractive to us, or which excites our attention most readily, in the external world,—by proximity in time, indicative of the all-important sequence of cause and effect, a knowledge of which is the great source of gratification and of power,—by proximity in space, the province of the dominion of the senses,—and by resemblance or contrast, the foundation of every mode of expression, of language, of classification, and of the fine arts,—it seems impossible not to refer the association of Ideas to the presence of latent desires, which are entertained unconsciously, because they are always entertained, and thus to ascribe the silent current of our thoughts, which flows on alike by day and by night, to the influence of the same attractive principle which is known to cause the occurrence of

our occasional, and therefore conscious, successions of Ideas.

(22.) These two great laws of mental sequence, however imperfectly expressed, and subject to whatever modifications, are manifestly laws of natural causation, connecting antecedent and consequent Ideas as *cause and effect*; not originated by the individual on whose mind they operate, but acting frequently without his intention, and even without his consciousness. If a knowledge of them gives him the power to make an occasional use of them, they are no more on this account to be regarded as subject to his will than are any other known laws of Nature. When he has become acquainted with this part of his mental mechanism, he may, if he desire to operate on his own mind, fill it, by means of artificial memory, with a collection of facts, conveniently assorted, permanently retained, and capable of being produced, as occasion may require, with a promptitude that must appear miraculous to those who have not learnt the art of guiding the intellect; or, if he desire to operate on the minds of others, he may call up a crowd of facts,

grouped in the order, arrayed in the colours, and productive of the Emotions which he desires, but in each case, and whether relying on the law of former Co-existence, or on the law of Resemblance, it is obvious that he must trust to their operation as he trusts to the stability of other natural laws, to the gravitation or the coherence of matter, to the buoyancy of water, or to the elasticity of steam. And when the actions of large masses of men, guided by the same mental principles, fall under his observation, — when the different forms of Consumption, and of Production, and of Interchange are considered, — it must be obvious that, in these cases also, the same laws control alike individual minds, and the great ocean of thoughts on which national actions are embarked, — that Ideas follow Ideas, as we have already seen that actions follow Ideas, naturally and independently, in the absence of direct interposition of the Will.

On the manner in which these trains of Ideas actuate the great phenomena of Political-economy, it is scarcely necessary to enlarge. As, in the early studies of infancy, the *mental* portion of the arts of walking, of standing,

and numerous others, are learnt by repetition, Idea at length succeeding Idea, without attention, and almost without consciousness, in the order which has been frequently practised, so, at a more advanced age, the memorial processes of each art become stereotyped in the mind of the Producer, and, having been so acquired, are justly regarded as valuable faculties, to be employed at the will of their possessor. If we contemplate the artificial successions of Ideas which exist in the mind of each individual who practises an art, trade, or profession, it will at once be evident how large a part is played by this habitual juxtaposition of Ideas in the processes of national Industry. It is equally perceptible how these trains of actions are guided to the most profitable results by the new conceptions of similitudes and contrasts which arise in minds possessing higher capabilities, or placed under the influence of more favourable circumstances. Nor is it less evident how powerfully both of the principles which govern the connection of Ideas operate on the processes which run counter to Accumulation. In considering these cases there are probably few inquirers

who will rest satisfied with silently contemplating the permissive operation of laws of Nature, and will not immediately remark, how wide a field is here open for the improvement of man's physical condition,—what incalculable effects *education may produce on Wealth*, by connecting the Ideas which ought to be connected in the mind of each operator, thus constituting him the best possible instrument of Production and of Interchange, and by keeping apart, in the mind of the consumer, Ideas the connection of which leads to extravagant dissipation.

(23.) It will be readily conceived how a knowledge of these two laws of Mental Association may hereafter serve to furnish the inquirer into the natural principles of Political-economy with his most approved marks of classification. To endeavour, at the present moment, to apply these intellectual laws to such a purpose would evidently be premature and fruitless; we have, therefore, in classifying the operations of Consumption and of Production, had recourse to the less elegant and more imperfect marks offered by Physiology. It may, however, be anticipated

that, in the progress of science, and by a much wider extension of the division of labour, the ground will hereafter be prepared for the application to these phenomena of a system of classification such as we shall here specify, not widely differing, it may be observed, from that which we have already employed, but denoting nearly the same classes with more accuracy, because standing higher in the chain of causation. The law of former Co-existence and the law of Resemblance respectively govern courses of action which may be readily distinguished. The law of former Co-existence produces, in the world of Ideas, phenomena analogous to those which the attraction of matter produces in the external world. If the various parts of a machine are put together, so they remain — if various ideas are fixed together in the mind, so they remain; it is this quality of permanence, of remaining unchanged by time, which renders both alike available for the purposes of human art, and which, it may also be remarked, causes the actions due to the Law of former Co-existence to be continually superseded by the use of a larger number of mechanical contrivances, —

as, for example, the action of walking by the use of wheels, the action of writing by the use of the printing-press, of weaving by the use of the loom, of sewing by the sewing-machine, and various other actions by various applications of steam-power. The Law of Resemblance, on the other hand, causes successions of Ideas which cannot be compared to any of the relations existing amongst forms of matter, except perhaps to the similitudes which exist among the members of the vegetable kingdom and other parts, each resembling the other, and yet none exactly alike. The operation of this law, we may be fully assured, can never be supplanted by any principle of matter,—for the human actions which it causes, so largely conducive to Wealth, no artificial machinery can ever be substituted; whilst the power to perform these actions is, in a great measure, dependent on original constitution, and can be but imperfectly secured even by means of education.

This obvious and well-defined difference between the two Laws of Mental Association will indicate how they may serve to classify, and

to denote the classes of, those actions of which Political-economy takes cognizance.

Thus the industrial actions, performed by the productive classes of every civilized community, may be divided into four classes, each denoted by an appropriate and well-defined intellectual operation.

The first of these classes is marked simply by the operation of the Law of former Co-existence of Ideas. Thus are connected the trains of thought which govern those classes of actions, the art of performing which is learnt simply by memory, and the performance of which constitutes the least intellectual portion of Physical Labour. Such are the operations of digging, thrashing, rowing, sawing, and the like.

The second class is marked by the application of judgment to these merely memorial trains of thought. Thus are governed the actions which characterise the officials of every class, who superintend the execution of works, as masters of vessels, farm bailiffs, directors of gangs of labourers, master workmen, and others who unite experience of the past with

the application of judgment to existing circumstances.

The third class is marked by the application, of the Law of Resemblance to these processes of thought. By the mental principle, thus constituted, are obviously connected the Ideas whence spring productions of a higher order, as when the painter produces a suggestive likeness, or the sculptor forms an idealised image of life, or the actor adds new beauties to the words of the dramatist, or the poet adorns simple truths, and makes them attractive to the many.

The fourth class of actions is marked by the further application of judgment to Resemblances, or by that perception of Analogies which stamps the highest order of mind in every profession, and which may be exemplified in the services rendered to Production by the judges who sit in the supreme courts, by the legislators who are deservedly the leaders of their party, and by the investigators of philosophy and of science, whose names are remembered by succeeding generations.

CHAP. V.

The Growth and Development of Mental Phenomena. —
The Conception of Value — its Causes and Conditions.
The Value of Commodities and of Labour. — Measures
of Value. — Accumulation.

(24.) IF the Laws of Sensation, of Emotion, and of Association were the only principles of the human mind, Political-economy could not exist ; it is the process of Mental Combination (the consideration of which, in conformity with the natural order of the tracts of psychological inquiry, we have reserved for the present chapter) that binds up the scattered elements of thought, and renders possible the modes of Consumption, of Production, and of Interchange, that are carried on in human societies. What is Value ? How can it be measured ? Is more than one kind of measure ever required ? How does the Value of Commodities vary in consequence of changes in the quantity ? How does the quantity of Commodities produced vary in consequence of changes in

their Value? These and similar questions, a knowledge of Mental Combination alone enables us to solve.

By this principle, Sensations and Ideas, which have been habitually entertained together, become indissolubly united, and so intimately blended, that they appear to the untutored perception to constitute naturally one state of mind. Thus although, as is well known, the eye and the ear have no intuitive power to distinguish distance, and this power is in every case the result of judgment based on experience, yet we appear to ourselves to be naturally able to see whether objects are near or remote, and to hear whether sounds are close or far off; and in these and the numerous other instances familiar to psychologists, so close is the connection between the original and the acquired property of the organ, that no mental analysis is able to resolve it, nor, indeed, could its origin have become known but by observing the natural education of infancy. Whether this mental amalgamation of several Ideas be conceived to exist only in appearance, its appearance being caused by the infirmity of our intellectual perception, as se-

veral rapidly revolving bodies appear to be one to the visual perception,—or be conceived to be caused by a principle of actual combination, as elements are united by chemical affinity,—or be rather ascribed to the natural growth of the human mind (aided by the assimilation of the brain), developing new conceptions from external sources, as new tissues are formed by the vital principle,—it is only necessary for our present purpose to observe that, however caused, it affects powerfully the thoughts and the actions of each individual, and especially those which, having reference to pleasure or pain, attract the largest share of unconscious attention.

(25.) To apply our knowledge of this principle to the elucidation of our present subject, we must commence with the consideration of its effect on those elementary thoughts which we have examined, and trace its influence on them ; since the complex conception of Value cannot be directly resolved by any intellectual analysis, we must endeavour to trace its progressive growth in the human mind, as moulded by the operation of this principle through successive stages, observing the

various feelings as they arise, the secondary conceptions as they are compounded, and the manner in which, by the use of the physical appliances of social life, they assume a definite form in the mind of each individual, and ultimately become subject to exact measurement. The elements of thought of which we are thus to trace the growth, are the feelings of satisfaction and of dissatisfaction, which enter into and become combined with the Ideas of certain objects, and of certain actions; the nature of this process we shall, in the first instance, attempt to trace generally, reserving our ultimate application of its principles to those particular forms of satisfaction and of dissatisfaction, which, as we have seen, accompany the Consumption and the Production of Commodities.*

When an object has rendered us a signal service, a totally new feeling becomes attached to the Conception which had been previously formed of it, and, if the service is of extreme importance, the Conception and the feeling may remain ever after inseparable. Thus, the boat

* Chapters I—II.

which has proved a refuge from a watery grave, the horse whose fleetness has distanced an enemy's force, or the chalet which has warded off the perils of an Alpine night, may come to be thought of ever after with a feeling that closely approaches to Gratitude. If a service, although of a slighter kind, has been very frequently rendered, the same object having proved on every occasion a source of pleasure or an alleviation of pain, the feeling which is thus caused will also become intimately blended with every Conception of the object. Such are the Conceptions that may be formed of the fountain whose waters have never failed, of the shade which in summer has never been found wanting, of the romantic spot that is always alive with new images of beauty, — Conceptions fraught with a feeling of Regard, not very dissimilar to that with which are contemplated the living companions, who multiply our joys, and share our sorrows, and our affection for whom has been traced by Hartley to this principle of Mental Combination.*

* It is easy to perceive how the complacency inspired by a benefit may be transferred to a benefactor, and

If, in addition to the feelings which thus arise from experience of certain objects in the past, there be also entertained other feelings which have reference to the future, and which centre about the same objects, Conceptions of these objects will be formed in every mind, ascribing to them qualities which can only be expressed by the word *valuable*. Whatever, in the abstract, is the origin of a feeling of confidence * in the future, — whether it be rightly regarded as a first principle of human nature, or be deduced from past experience of the laws of cause and effect, — we must all concur in admitting (and it is this alone which affects

thence to all beneficent beings and acts. The well-chosen instance of the nurse familiarly exemplifies the manner in which the child transfers his complacency from the gratification of his senses to the cause of it, and thus learns an affection for her who is the source of his enjoyment. With this simple process concur, in the case of a tender nurse, and far more of a mother, a thousand acts of relief and endearment, of which the complacency is fixed in the person from whom they flow, and are in some degree extended by association to all who resemble that person; so much of the pleasure of early life depends on others, that the like process is almost constantly repeated.” — *Mackintosh on Ethical Philosophy*.

* Mill on the Human Mind, vol. i. p. 274.

our present inquiry), that various shades of belief in the *future* of various objects are naturally blended with the Conceptions of them entertained in each human mind. It is evident that objects only begin to be truly regarded as valuable, when there is attached to them some definite degree of this belief, something beyond that hope which faintly illumines the breast when the dictates of reason would leave it in darkness, something approaching that expectation with which the return of a freighted ship, the safety of a house from fire, the extension of a life, the security of property in the hands of an agent, or the return of a loan from a creditor is regarded, if not amounting to that perfect degree of confidence which is attached, under a free government, to the satisfaction that is to be derived from our possessions. To whatever objects the conception of Value is attached, and however it is measured, the influence of this essential element — confidence in the future — will always be found perceptible.

(26.) By the gradual accretion of these elements, the mental attribute of Value insensibly grows to maturity, and becomes indis-

solubly blended with our Conceptions of a class of objects the number of which is exceedingly great. Which among these objects, we have to inquire, fall under the cognizance of Political-economy, and what is the consequence of this attribute of Value being mentally ascribed to them?

It is not difficult to satisfy the first part of this inquiry, if the functions of Political-economy be considered as extending to their furthest limit. Human Laws are so obviously the instrument by whose aid alone the objects of this art can be effected, and the capabilities of this instrument so obviously limit the objects which fall under the cognizance of the science, that it is at once apparent that the Political-economist is concerned with the valuable objects to which the protection of the Law is extended, and that he is not concerned with valuable objects which are not so protected. Thus, whilst such objects as seasonable weather, good health, peace of mind, a tried friend, would be universally regarded as valuable, these could never form a part of the subject matter of Political-economy, even if regarded as extending to its utmost limits: whilst such

valuable objects as the free use of light, and of pure water, and of unadulterated air, unsullied character, and good education, might be so considered, because in every civilized country they are recognized, and are more or less protected by the Courts of Civil Jurisdiction. If, however, the functions of Political-economy be regarded, not as extending to this their utmost boundary, but only to the Consumption, the Production, and the Interchange of Wealth, the number of valuable objects that claim our attention will obviously be much narrowed. A large number of the valuable objects that are protected by the Civil Law, such, for example, as those which we have just instanced, cannot be exchanged from their very nature. There are others which the policy of the Law will not suffer to be exchanged; thus, it is probably the illegality of the transaction alone that, in many cases, prevents the transfer for pecuniary consideration of seats in Parliament, of government offices, and of rights to rank and title. Valuable objects such as these, although recognized by the Law, are not included in that peculiar class which derive additional Value from the fact of being made the

subject of Exchange. What the peculiar significance of this property is, why it should not only constitute the characteristic feature of a large class of valuable objects, but should elevate this class to a position that claims, almost exclusively, the attention of this branch of Political Philosophy it is not difficult to perceive. The susceptibility of being exchanged constitutes the characteristic of the class, because it is the valuable property which they have in common; their other valuable properties may serve, some for one purpose, others for another, some to gratify the eye, some the ear, others the taste, but the one common purpose to which they all alike administer, is that of procuring other objects in exchange: and the possession of this property attracts to the natural laws which govern exchangeable Commodities a large share of the attention of Political-economy, because through its means they are produced in incalculably greater quantities, and are allocated in the manner most conducive to the gratification of human nature. It is indeed the power of exchanging Commodities that, next to the interchange of moral sympa-

thy and natural affection, and to the necessity for mutual defence, most closely connects human societies.

(27.) Slowly reared from these initiatory Sensations, the Conception of the Value of exchangeable Commodities grows imperceptibly in the mind of every member of a civilized community ; so insensibly, indeed, is this mental process carried on, that it is difficult, in our maturer years, to trace the steps by which we have attained a definite knowledge of the degrees of Value that we attach to different quantities and qualities of each Commodity, whether derived from our own experience of valuable objects, or from the communications of others. It is thus, however, that each individual gradually imparts to his Conceptions of valuable objects, feelings derived from his experience of their availability to increase pleasure and to diminish toil, and entertains these modified Conceptions with more intelligence, and with greater confidence, the more he is conversant with these objects. The fisherman thus extends to his estimation of the finny tribes, of his nets, his boat, his hut, not only a ray of the satisfaction which is derived from

appeasing hunger and gratifying the palate,—the miner extends to his estimation of his coal, his shafts, and tramroad, and ropes, and pick-axes, not only a grateful remembrance of the uses of fuel,—the husbandman extends to his estimation of his flour and his grain, his agricultural implements and his farm, not only a sense of the benefits which the staff of life affords,—but each of these, and all other members of a civilized community, in their several vocations, extend to their estimation of every Commodity a consciousness of the benefits that may be derived from all those for which it can be exchanged, and thus affix to it the highly complex attribute of Exchangeable Value.

If Value were nothing more than this — if no further conditions were to direct and to mature its growth,—it is possible indeed that traffic might be practised by the barter of Commodities, as in the rude intercourse of uncivilized nations; but those extensive and nicely measured human operations, which alone are worthy the attention of Political-economy, could have no existence. In order to complete our view of the nature of these

operations, we must advert to circumstances by means of which the amounts of this conceived attribute — Value — are measured as it grows, and attached to different objects in different degrees, with the assistance of an instrument that imparts to these processes a great degree of accuracy, and causes their results to be expressed in language of the utmost clearness.

To measure a complex *mental* conception by means of an instrument formed of *material* substances, might at first be thought almost paradoxical. Distance can be measured, and weight, imperfectly by the human feelings, more exactly by the aid of instruments; sound too, and perhaps also colour, may eventually be so measured, because they are known to be caused by mechanical vibrations: but to measure an internal mental phenomenon by an unconscious material index is a very different process. If, however, it be borne in mind that human actions are the exponents of human thoughts, and that by these human actions are caused the indications of the physical instrument to which we are about to advert, it may in some degree be anticipated

what functions such an instrument will be found to discharge, when universally employed in the numberless operations of Interchange.

Money, the great material instrument of commerce, discharges two principal functions: primarily, it is a representative of Value, in discharging which function it becomes, secondarily, a measure of Value. States of society have doubtless existed in which objects of indefinite Value, such as oxen, shells, and nails, have passed current as Money, from a general understanding as to their convertibility only, and without reference to any exact standard of Value,—as a traveller may sometimes invest his fortune in precious stones, in order to convey it from one country to another. But Money of this description will evidently not satisfy the exigencies of advanced states of society; for these there is required not only a representative of Value, possessing portability and durability, but representatives of numerous amounts of Value, bearing a known relation to each other, and protected by legal authority. Money, thus constituted, becomes a well understood instrument of commerce, measuring the Value set upon each Commodity in every act of In-

terchange, and sharply impressing a knowledge of the amount on the intelligence of the parties to every such transaction.

So vigorously, indeed, does Money fulfil the purpose of representation, that it has, as is well known, been mistaken, not seldom, or on slight occasions, for that which it represents and measures, — it has been imagined that Money is not only the instrument of Exchange and the measure of Value, but that all Value is centred in Money. There is probably no risk that any such imaginary attributes will in future be attached to the medium of Exchange, but the fact of their having at one time received universal credence, affords cogent evidence how strong an impression the frequent employment of this physical instrument naturally makes on the human mind.*

(28.) With the assistance of the various monetary systems employed by different nations, two mental operations, Comparison and

* An instance of similar confusion may be found in the History of Ethics. "Mackintosh has, with great propriety, insisted on the importance of a distinction of two parts of Moral Philosophy which are often confounded — the Theory of Moral Sentiments, and the Criterion of Morality." — *Whewell*.

Abstraction, are frequently performed by every member of a civilized community with confidence and with exactness. These mental processes, it has been established by psychologists, may be, and often are, performed automatically, without the intention or even the consciousness of the individual; there can be no doubt that they are thus performed much oftener than might be imagined, and that they exert an important influence on the character of every growing Conception. When it is seen that during the performance of these mental processes, it is only necessary to observe the Prices for which objects are bought and sold, in order to find the general amount of their Exchangeable Value expressed in the most exact language, it is sufficiently obvious how, in every mind, definite Conceptions of a vast variety of Commodities, accurately distinguished in point of Exchangeable Value, come to be fully matured, confidently entertained, and rarely suffered to escape from the memory.

It is thus that, by the wonderful alchemy of mind—by Memory, Confidence in the future, Comparison and Abstraction, acting under

the ever present influence of Combination, and aided by external appliances—the feeling of satisfaction eventually grows into the conception of Value; that the Sensation being remembered, and attributed to its permanent cause, and frequently anticipated, eventually produces the Idea; that the fleeting shadow types its enduring impression; and that impalpable varieties of degree become subject to exact numerical measurement. So great a change might almost seem to justify the Political-economist in losing sight of the existence of the original Sensations, were not his attentions continually called to the all-important subject of the changes of Value. When it is attempted to determine the amount of these changes, it immediately becomes obvious that, as the Conception of Value originated in past satisfaction, so it is only attached to Commodities with a view to present or future satisfaction; on this present or future satisfaction it is based, and by the contemplated changes of this present or future satisfaction its changes are determined. The buyer and the seller of each Commodity consider—not, indeed, in reference to

their own feelings alone, but also in reference to that wider field of human nature to which their market extends, either by the blind arbitrament of present prices, or by a sagacious forecast of the future—the degrees of satisfaction which will arise from the Consumption of existing or of future quantities: on this ground they act, and by their united acts indicate the Exchangeable Value of each Commodity.

Hence arises the importance of discovering the different degrees of satisfaction which different classes and different quantities of Commodities yield to human nature—a subject which has tediously occupied our attention, but a knowledge of which, when applied to the consideration of fluctuations of Prices, will, it is believed, be found to cast a light on this class of questions that can be derived from no other source.

(29.) The class of objects to which this attribute of Exchangeable Value is annexed, may, as we have already observed, be recognised through this incident—that Money is commonly paid for them; or they may be distinctly specified as a class, if we appeal to the interpreters of the civil law, as administered


in each country, to determine what objects are there recognised as Exchangeable Property. These objects, therefore, it is needless to attempt to particularize. There is, however, one very important section of the class which is materially different from the remainder, and the consideration of which offers peculiar difficulties. If Money be paid for the services of a free citizen, by what natural laws is its amount determined? By what principles is the remuneration of excessive Labour, of skilled Labour, of natural talent, governed? In those countries where slavery is unhappily enforced, the Exchangeable Value of human services may be regulated, like that of any other Commodity, by the laws which we have examined; but where free men labour for free men, entertaining an aversion to toil in different degrees, according to its kind and quantity, and having the power to act on that aversion, it is evident that the amount of their remuneration can only be determined by introducing other elements of calculation.

The determination of the amount of Wages must be commenced by regarding the labourer abstractedly as exhibiting two functions, capa-

bilities and susceptibilities. In the former of these characters the labourer appears as an organic machine, void of the sense of toil, contributing to the progress of productive industry by means of the efferent nerves acting in obedience to those natural laws some of which we have considered, and commanding, therefore, like any commodity that bears a money price, the Exchangeable Value of these services; small in amount if they be of an ordinary character, higher if they be highly endowed by Nature, or have been artificially elaborated. With this element of wages we shall have no further concern. In the second of these characters the labourer appears as a sentient endurer of toil, felt through the afferent nerves in its different degrees, with different degrees of dissatisfaction, remembered and contemplated with different degrees of aversion, and only endured in contemplation of preponderating amounts of satisfaction. The Conception of toil, which is thus caused to be entertained, is evidently an extraneous element in the thoughts of those who exchange their services, becoming very obvious when there is an exorbitant demand for these services, and re-

quiring on all occasions distinct consideration. In the present case a few remarks will suffice to show how the influence of the Conception arises, since we have already fully examined the elementary Sensations of toil, and the mental principles of Association and Combination by which these grow into the Conception of toil we have also had occasion to examine, whilst considering the growth of the Conception of Value.

(30.) Toilsome Sensations may arise from, and consequently feelings of aversion may be entertained towards, the performance of some productive actions for which Money is not paid, but which the citizen even of a free state may be obliged to perform,—such, for instance, are the compulsory duties of overseers, constables, jurymen, sheriffs. The feelings of constraint, abnegation, irksomeness, if not of positive effort, which accompany the performance of such duties, are remembered, and, occurring when the idea of each office occurs, become mentally combined with it, and form integral parts of its conceptive character in the minds of those who have personally dis-



charged the office, and in popular estimation generally, through their communication to others.

Precisely similar to the simple feeling of aversion which is entertained towards these compulsory actions, is the feeling of aversion which enters into the complex conception of Labour as contemplated by the labourer. Whilst the laborious action is regarded as possessing a positive Value on account of its pecuniary reward, it is regarded as possessing also a negative Value, on account of the toilsome feelings which are its inseparable accompaniments.

When Labour is regarded as an exchangeable Commodity, since this negative and this positive Value affect conjointly the Price that is paid, or the amount of Wages, it is difficult to determine how far any change of this amount is due to a change of the one, and how far to a change of the other of these elements. Money is thus found to be an inefficient and sometimes a perplexing measure of the Value of Labour. When, however, not Exchange, but the other no less important

consequences of Value, which constitute Production, are considered, it is found that this incidence of toilsome feeling, and the consequent conception of negative Value, may be accurately measured by their effect *on the rate of Production*. To the principle of this dynamical measure we shall have occasion to refer hereafter; we need only here premise that when its application is fully considered, the variations of toilsome feeling that accompany various amounts of exertion *, will be found to merit the degree of attention which we have bestowed on them.

(31.) By means of the same principle can also be measured the influence of that desire of Accumulation which results from the Conceptions of positive and of negative Value, and which, no less than the aversion to Labour, influences the rate of Production, but in an opposite direction, affording, when entertained in a high degree in the mind of wealthy capitalists, the chief motive power to the wheel of industry, and constituting the principal cause that some

* Chap. ii.

nations are rich, whilst others are poor. To explain the growth of this ulterior state of mind, we must refer to another mental process — the last, but not the least wonderful, of those that affect the subject of Political-economy.

If the Conception of Value be rightly derived from the recollection of Pleasure that has been enjoyed, how can it actuate the rich in opposition to Pleasure? Why do they who possess the largest share of Wealth often exhibit the greatest disregard for pleasurable Sensations, pursuing the work of Accumulation with calculating and plodding industry, voluntarily consuming the food, wearing the dress, and using the conveyance, that restricted means impose upon others? When deaf to the calls of ambition, and blind to the charms of power, without the obligation to provide for a family, or the wish to endow a charity, why do the princes of monetary possessions still continue to be merchants, and the honourable of the earth to be traffickers? When certain objects which in past times have imparted pleasure or alleviated toil, and which will probably produce the same effects in future times, have on this

account been regarded as valuable, and when, further, a portion of these objects being durable, susceptible of appropriation, of accumulation, and of transfer, and being also protected by the law as Property, have been frequently contemplated in all their relations, and the highly complex notion of Wealth has been at length formed, if from the desire of Wealth there were to ensue the actions that conduce to the realization of a limited amount of Wealth, and these were to be succeeded by the actions that dissipate that Wealth in pleasure,—if Money were to be sought for in order to be spent as soon as gained,—such conduct would require no explanation: it would only be the natural result of the laws which we have examined, although, if generally pursued, it would obviously be fatal to the interests of every civilized community. That such is not the course of conduct usually pursued, is due to a mental principle, of a curious and almost paradoxical nature, which has only become known to psychologists through their investigations into some of the strangest anomalies of human character. By the operation of this principle,

whether it be a first principle of Psychology, or be deduced from the inability of the human mind, when unsupported, to dwell long upon abstract notions, or from our natural tendency to continue the performance of actions that have been often repeated, a transference of affection from Sensations or Ideas to their *material causes** takes place, and in consequence of this transference a desire to attain the former ceases to be, and a desire to attain the latter becomes an efficient motive of conduct. It will occur to every one how often the veneration due to the Power has been forgotten in the veneration supposed to be due to the Idol, or, to advert to an example more conformable to our present subject, how in the case of the miser the objects which were originally valued, only because they afforded pleasure, have ultimately been valued for themselves, independently of, or in opposition to, pleasure. From these instances of mental disease, it is pleasing to turn to the innumerable instances in which the same principle operates beneficially, producing that manly

* Brown's Philosophy of the Mind. — *Lecture* lxix.

regard for pecuniary interest, which, whilst affording occupation and gratification to the individual, supplies Labour with Capital, and enriches successive generations with the accumulated products of bygone Industry.

BOOK II.



THE APPLICATION
OF THE
PRINCIPLES OF PHYSIOLOGY
AND OF
PSYCHOLOGY
TO
POLITICAL ECONOMY.

CHAPTER I.

Connection of the Principles of Physiology and of Psychology with the Subject of Political-economy.—Unity of Public Opinion and Community of Industrial Action.
— Public Economy as observed and controlled by the Executive and by the Legislature.

(32.) As the human body is universally found to be framed after the same type, by its conformity with which all its parts are known to belong to man, whatever their varieties of feature or of complexion, of stature or of strength, so the human mind, whatever idiosyncrasies it may exhibit in particular instances, is universally found to offer to the philosophical observer the same general class of natural phenomena ; among the most general of these subjects of the Philosophy of the Human Mind are comprised those phenomena the consideration of which has hitherto occupied our attention—whether the sensations of Pleasure that are derived from the possession of objects which constitute Property, and which are greater than, and prevail over, the

sensations of toil that accompany the efforts by which alone they are commonly produced, or the consequent conception of Value set upon these objects, or the will to labour for the purpose of producing, and to exercise self-denial for the purpose of accumulating them. We have now to consider how a knowledge of these abstract principles may be applied to illustrate the modes of Production, of Distribution, and of Consumption, practised by numerous individuals when aggregated in one body politic, or how it may serve to accomplish the purposes of the great social art, which would be properly named Social-economy were all men united in one community, but which is more expressively named Political-economy, as requiring to be applied in a different manner to each of the several political units into which the human race is divided, by differences of language and of race, and by the inequalities and disruptions of the earth's surface. When we pass from the provinces of Physiology, and of Psychology, to the field of statistics, it will be anticipated, by all who are acquainted with the nature of these records, that the results of the principles which we

have hitherto investigated within the dark recesses of self-consciousness, will appear in a new light—that the impalpable Sensations, Emotions, and Ideas of Mental Philosophy will be evidenced by their influence on material substances, and that individual actions, ever fleeting and evanescent, will find their expression in enduring national actions—that regarding each individual mind as but one particle of a mass, and surveying the broad tide of national mind, we shall be able to observe the number and the magnitude of its undulations, or to measure, in the cold annals of the past, the glaciers of human action, standing out in durable forms, and offering themselves as subjects for deliberate examination, and as the bases of numerical calculations.

Whilst we pursue the results of our abstract inquiries into this new field of observation, it will be borne in mind that although it may be found convenient to refer, for the purpose of illustration, to the political questions of the day, it is no part of the province of any art to determine what ought to be the ULTIMATE objects of those who practise it ; the art of build-

ing, for example, does not teach us *whether* a house ought to be built, but *how* it ought to be built, when the project has been resolved on ; and it is obvious that the most satisfactory determination of the abstract laws of Political-economy will not serve to guide us to the same practical measures, unless our opinions also agree respecting the *ultimate* objects to which the conduct both of public and of private life should be directed. He who, with the Greek moralist, holds it to be his duty "always to excel and to surpass others" will not adopt the same course of conduct as he who holds an opposite opinion ; the State which aims at national pre-eminence will not adopt the same measures as that which merges the love of country in the feeling of universal philanthropy, to whatever extent these may agree in the abstract principles of Political-economy. These principles, therefore, however clearly settled, cannot be applied to determine conclusively such practical questions as the expediency of Free Trade, of Poor Laws, or of Taxes on testamentary dispositions, except by those who agree upon higher principles ; statesmen who prefer being silent


respecting these latter, whilst advancing purely political reasons for or against measures of Government, can only be compared to combatants who handle good weapons, but prefer fighting in the dark. Much as this consideration may be thought to detract from the interest of abstract Political-economy, this disadvantage must be regarded as in some measure compensated for by the opportunities which we enjoy of working out our conclusions at a distance from the noise of active life, and undisturbed by the passions and the prejudices which always surround its conflicting interests.

(33.) To advert, in the first instance, to the most general of the abstract doctrines which we undertook to examine—that which teaches that the consideration of every part of organic life must consist of two co-ordinate branches, the consideration of the organism itself, and the consideration of the medium by which it is surrounded—it is easy to observe how this doctrine affects the whole subject of Political-economy. Nations are living organisms,—Wealth is, in the eye of Political-economy, the most important of the media by which they

are surrounded ; the reciprocal relations of Nations and Wealth form, consequently, the subject matter of this science, and every system of legislation propounded by it ought to regard simultaneously both Mankind and Wealth ; yet it is not perhaps too much to affirm, that in no promulgated system has this principle ever been distinctly avowed. When we find that Lycurgus, and other less renowned legislators, directing all their attention to the bodily health and strength of their fellow-citizens, framed laws designed only to prevent deformity and disease, and to impart vigour, skill, endurance, and ardent patriotism, whilst neglecting or discountenancing the Consumption, the Production, the Interchange, and the Accumulation of material Wealth, we must pronounce that they did but half their duty as Political-economists,—they nursed the living organism of the State, but neglected the external appliances which are necessary for its improved culture. When, under the administration of Political-economists of a later date, we find the opposite extreme,—that every thing is sacrificed to the culture of Wealth, either by direct enactments, or by

allowing its possessors to overrun the best interests of the State by means of the power which it naturally imparts,—that whilst this object is exclusively regarded, the stature of the majority of the people becomes stunted, their health impaired, their limbs distorted, and their natural term of life shortened,—that females are corrupted and brutalized, and children are suffered to grow up in ignorance, impatient, and unskilled, if not cut off by untimely Labour,—we must pronounce that the Political-economists who have thus administered affairs have done but half their duty, and that half, we must add, not in condemnation but in sorrow, that which had been best left undone. Political-economists* would have learnt much from abstract philosophy had

* Future Political-economists may read with surprise that at a time when farm-labourers, and unskilled needle-women, could with difficulty obtain a bare subsistence, to spend large sums on dress and equipage was thought praiseworthy by moralists, as serving to encourage trade, manufactures, and the fine arts; and that at a time when truth and charity were generally respected, advertised falsehoods and insinuations against rivals were universally tolerated, if not encouraged, when employed in the cause of competition.



they only accepted this fundamental maxim—that Health and Wealth are the correlative and inseparable objects of their art.

(34.) Having thus premised, that in every phenomenon of Political-economy the two co-ordinate branches, Mankind and Wealth, act and re-act simultaneously on each other, we naturally commenced our inquiries by dividing our subject into two rudimentary parts, human nature and external matter; and, having selected the former of these divisions for prior consideration, we proceeded to inquire whether the definitions and the classificatory marks of Political-economy ought not rather to be deduced from the phenomena which are manifested by human nature, than from the relations of matter from which they have been deduced by those modern writers who have, not unreasonably, sought their first principles in the same branch of the subject which they have recommended exclusively to the care of statesmen. If the whole course of our reasoning was not based on error, we must conclude, with respect to the most important of these definitions, that *Value* is not a *condition of matter*, but a *purely human* condition; that,

whatever aversion may be felt to metaphysical subtilities, and however Value is *measured*, it is a natural phenomenon of the human mind, resulting from that universal anticipation of future satisfaction which is grafted on the experience of the past. If Animal Life were to be swept away from the face of the earth, the sun might give light and warmth, fertile lands might be spread out, juicy fruits and fragrant spices might grow, gold and precious stones might glitter, but these could have no Value — the mind, the soil on which alone this conception can grow, would be wanting; and without this, Value could not exist. Of the importance of settling the habitat of this, the first great chimera that we have to encounter, none will doubt who have perused and attempted to reconcile the numerous and ever varying definitions which have been affixed to it; whilst, to find its real nature, unexpressed by the terms of any of these definitions, may afford hope to those who, having fruitlessly attempted to build on the foundation which they offer, have been compelled to despair of the progress of Political-economy.

(35.) The conception of Value, thus enter-

tained in the human mind, we traced from its source, and eventually found it to assume, like all other Ideas which are derived from pleasure or from pain, two distinctly-marked characters, one Conceptive, the other Emotional, producing in the external world two distinct classes of phenomena which in the most general language may be termed Statical and Dynamical, and, in the technical language of our subject, phenomena of Price and phenomena of Production. It may be observed here, that it is a matter of no small consequence to be able to trace, by the light of abstract philosophy, the branching of these phenomena of Value from their very root, to see that every change of Consumption *naturally* produces a change of Value, and that every change of Value is *naturally* followed by a change of Production. If this *law of Nature* were to be clearly apprehended — if it were to be clearly felt that every purchaser of a Commodity not only raises its Price, but causes its Production — public opinion would scarcely sanction the lavish expenditure of money on articles which serve only to feed vanity, or to gratify a taste for frivolous distinctions. They who spend

money on these articles of luxury virtually order labourers to make more; they who spend money for the purpose of placing within reach of the poor better dwellings, better fuel, better clothing, virtually order labourers to make more: if the former course be preferred to the latter, food, cottages, and fuel are converted into articles of luxury, by an unseen, but not, on that account, a less effectual process. Were the principles of human nature better understood, the course of Labour would be less frequently diverted from its proper channel, whilst the kindly wish to give employment to industry would be equally gratified.

Tracing the formation of this mental attribute, Value, we found it to be derived from two principal constituents — Memory of the past and Confidence in the future — from the recollection of the gratification afforded, and the services rendered by external objects in bygone time, and from the belief that they will continue to be so afforded and rendered by them in time to come. With respect to the latter of these constituents, Confidence in the future, we attempted fully to realize the im-

portant consideration, that it is essential to the existence of Value, — the more necessary to be borne in mind because changes of Confidence are very imperfectly indicated by changes of Price. When, under the administration of a bad or feeble Government, little Confidence is attached to the safety of Property, the Price of money-securities will naturally be low, and the rate of Production will be slow, but the prices of the Commodities which are consumed by the great bulk of the community may not indicate the dissatisfaction that smoulders in the hidden breast. Were it to be established, by evidence accessible to all, that Value depends on Confidence, and that a want of Confidence affects alike our enjoyment of the present and our provision for the future, revolutions and changes of government would be ranked by all classes among the most serious of moral evils.

(36.) With respect to the former of the constituent elements of Value, the recollection of the gratification directly or indirectly rendered by external objects, we observed, that whilst this gratification obviously differs in

kind and in degree, according to the quantity and the quality of the Commodity from which it is derived, each kind and degree of gratification is remembered, and that there are thus ascribed to each Commodity various kinds and degrees of Value. So much controversial energy has been expended on this subject, and so many conflicting reasons have been advanced to show why some things have Value and others have none, and why the Value of different Commodities varies in different degrees, that it may be expedient to recapitulate the course of reasoning by which we believe these points ought to be settled.

It will be remembered, that whilst some inquirers have derived all Value from Land, others from Money, and others, adverting to human nature, from Labour, we ascribed it to none of these things; but believing that the subject of Political-economy, when rightly viewed, is found to consist of an organism and a surrounding medium, which, in their improved condition, may be described as citizens, healthy and right-minded, and Property adequate to its occasions and wisely distributed,

we did not hesitate to describe Value as a human sentiment, derived from the perception of Wealth, however called into existence, and based on a belief of its future availability. Considering different kinds of Value to be differences in kind of this sentiment, we preferred classifying the causes of these differences by referring to the parts of the human body through which the senses are reached, rejecting alike the differences of external objects as being too remote, and the differences of internal sensations as being too indefinite for the purpose ; and we consequently commenced the classification of Valuable Commodities by grouping them under two heads, according as the services rendered by them to mankind appeared to be of paramount or of subordinate importance ; these classes we named respectively Primary and Secondary Commodities. The organs of the human body, we further observed, are capable of conveying to the senses satisfaction or gratification only within certain definite limits ; hence, we deduced the conclusion, that no Value can be attached to a limited amount of such objects as exist in unlimited quantities, for

the obvious reason that if such an amount were to be withheld, others of equal magnitude could be substituted for it, and this until all the wants of human nature should be satiated. We further observed, that when a moderate quantity of a Commodity has reached the senses of the consumer, each successive addition of the Commodity produces sensations progressively less and less satisfactory, and *vice versâ*; hence we concluded that, in proportion as objects are less abundant, any limited quantity must be held more valuable, and in proportion as they are more abundant, it must be held less valuable, the Value of every Commodity being dissipated as it increases in quantity, like a circle in the water, till "by broad spreading it disperse to nought." We further found that this variation* would naturally be greater in the case of Primary than in the case of Secondary Commodities. The

* "It is found that prices vary in a ratio very different from the variation in quantity, and that the difference of ratio between quantities and prices is liable to alter, according to the nature of the Commodity, but is greater probably in the case of corn than in that of most other articles of extensive consumption."— *Tooke on High and Low Prices*, p. 284.

susceptibilities, again, of some organs are dependent on those of others, and hence we drew the conclusion that the Value of Secondary Commodities is in the first instance dependent on the quantity of Primary Commodities. If, then, the student of Political-economy inquire why corn, wine, and oil are valuable, the answer clearly ought to be, not because they are derived from Land, nor because they are the result of Labour, nor because they are the subjects of Exchange, but because their future services are anticipated, and they can be appropriated. Why, then, are air, light, and water of no value? In this question there is an ambiguity; as a whole, light and water are of extreme Value, but if it be asked why any definite quantity of light or of water is of no Value, the answer is obvious—because it can generally be spared, on account of the indefinite quantity that exists, in proportion to the number and to the finite capacities of mankind, or because the whole existing quantity cannot be appropriated; under peculiar circumstances a small quantity of water, as in the mid-passage of the desert, and of light, as ancient lights in a city,

are valuable. Why do corn, wine, and oil, or, to speak more accurately, why does any specific quantity, as a gallon of either of them, change in Value? Principally on account of changes in their whole quantity, because their Value diminishes as this tends to superfluity, and increases as it tends to rarity*, in proportion to human wants and susceptibilities; such is the general principle which determines the Value of all Commodities, both Primary and Secondary. Why is the Value of bread and potatoes regulated by their whole quantity *more sensibly* than the Value of silks and gloves is regulated by their whole quantity? Because the former are Primary and the latter are Secondary Commodities; and when neither of these classes is abundant, the welfare of mankind is more intimately dependent on the quantity of the former than on the quantity of the latter class of objects. Why are precious stones of little Value in uncivilized countries? Because in such countries the supply of Pri-

* Vide Tooke on High and Low Prices, part iii. sect. 5. "Application of the Principles of the 'Effect of Quantity on Price' to the State of Agriculture." Vide also Tooke's History of Prices.

mary Commodities is usually scanty and uncertain, and the Value of Secondary Commodities is based on the abundance of Primary Commodities. Why are diamonds the most valuable of familiar substances? Because classes of society exist to whom an abundance of Primary Commodities is secured, and the extreme rarity of diamonds renders them the most prized of Secondary Commodities. To these and similar inquiries the student is now prepared to give answers, not deduced from arbitrary dogmas, nor resting on the authority of any name, but based on the natural phenomena of the human mind and body, which he can himself examine and understand.

(37.) Had valuable Commodities the quality of perpetual endurance, or were they not subject to absorption and to renovation at the hands of man, the consideration of the abstract principles of Value might be concluded when an exposition of these, its statical phenomena, should be attained. But this is evidently not the case; a large remnant of the effects of Value remains to be accounted for, and Production has therefore always occupied a considerable share of the attention of Politi-

cal-economists; we were accordingly led to investigate the elementary laws of Value which come into operation when this complex idea ceases to have a merely conceptive, and assumes an emotive, character. What, we inquired, is the effect of Price on Production? — of the emotive sentiment, Value, on enterprise and Labour? — and in the first place, generally, of Emotions on human action? The consideration of the elementary laws of this *vis viva* necessarily led us to an abstruse, and perhaps unsatisfactory, train of reasoning; but the conclusions to which it led will not be regarded as fruitless, if they are found to afford but an approximation to a deductive exposition of these important elements. The first result which we arrived at, that industrial actions, when viewed on a large scale, are to be regarded as unintermittent in the absence of disturbing causes, is a law on which must rest our appreciation of the dynamical science of Political-economy, and our faith in the future occurrence of each of its phenomena. If mankind could be viewed from the surface of the sun, they would appear to be never at rest; and this is the view of national actions

which Physiology and Psychology must force on the attention of abstract Political-economy.

It is manifest, that in every case that can be observed, the effect of this primary law of the rate of Production is very soon influenced by the effect of another primary law, acting in opposition to it whenever the Commodity is produced by human Labour — that which governs the ever-increasing degrees of toilsome Sensation accompanying increased Labour. We accordingly investigated the elementary nature of this Sensation, and thence traced the growth in the mind of the labourer of a Conception opposite to that of Value, and attached, not to various amounts of Property, but to the endurance of various amounts of Toil. Observing that this *negative Value* acts powerfully as an opposing medium to the rate of Production, we concluded that it enters into, and must be partly evidenced by, the amount of the Price of Labour. By thus directing our attention, not only to the feelings of the laborious classes, but to the exact measurement of the various degrees of Toil which they endure in the pursuit of their various avocations, we may hope to have at-

tained a more distinct knowledge of their actual condition, of their real wants, and of their true interests. If Nature rightly teaches us that the last fractions of protracted Toil are attended with ever-increasing suffering, that whilst in labouring man performs his destiny, in labouring immoderately he lowers his faculties and degrades human nature, a purely scientific Political-economy cannot rightly hold that the tenth hour of the artificer's time must still be inexorably devoted to the purposes of Production, or that, if moral or intellectual teaching were to be substituted, the prosperity of a nation would be endangered. Should philosophy ever be compelled so to govern any nation, the conclusion would be irresistible, that in the institutions of such a nation there must be some vital defect, the seat of which would probably be found in those laws by which Valuable Commodities are held, distributed, and transmitted to posterity.

From this double experience of the past — the experience of wants satisfied or gratification conferred by Commodities, and the experience of efforts made, or self-denial practised

in their realization — we observed that there results the desire of Accumulation, causing the abstinence from expenditure and the persistence in voluntary Labour, by which are eventually accumulated the hoards that, if properly distributed, constitute the Wealth of Nations. The encouragement of this course of action is evidently not only conducive to the interests, but essential to the existence, of a part of each succeeding generation. It is no small matter that abstract philosophy teaches how this conduct can be encouraged, by pointing out, that when a real want of necessities has been felt in early life, a strong propensity to acquisitiveness, and an unwillingness to consume, naturally ensue, and that, consequently, by so educating* the sons and daughters of opulence that they may be made acquainted with want, not sufficiently to harden the heart, but to inform the senses and the understanding, a bulwark may be raised against that prodigality by which, as we now see but too frequently, there may be dissipated, in a short time, and without enjoy-

* Brown's Philosophy of the Mind. — *Lecture* lxix.

ment, the resources which, if rightly directed, would have administered to thousands necessary sustenance or prolonged comfort.

(38.) Having examined these several functions of the Human Mind by means of self-observation and reflection, aided by Psychology, and with the occasional assistance of Physiology, we shall now endeavour to observe how these functions are exhibited when numerous individuals, so connected together as to form one social organism, pursue in concert the various purposes of Production, of Distribution, and of Consumption; and to determine what means the Statesman possesses of ascertaining the actual state of these operations, and what measures he can, and ought to apply in order to ensure their right performance. The type towards which, in the widest view of the Political-economist, all mankind must undoubtedly be regarded as, however slowly, yet constantly tending, is one vast human family, acting together in harmonious co-operation for the subjugation and the amelioration of physical nature; at the present moment, however, when nations are popularly considered to have conflicting interests, and

these interests are contemplated with much heat, the operation of the principles of Physiology on the subject of Political-economy may be best exemplified by considering how they operate in the case of a single nation.

A civilized nation is evidently an organic body, that has arrived at a certain stage of maturity at which it has become susceptible of common feeling, capable of joint action, and competent to entertain a *public opinion*. It is quite clear that at present a *perfect* state of these functions nowhere exists, but such a state may be conceived*, and ought to be regarded as the ideal regulative type to which every wise measure causes a nation to approach more nearly. In that approximate state, indeed, which is found in every civilized nation, we may feel assured that the true definition of organic bodies is satisfied,—each of its several parts affects, and is affected by, the rest. In every such nation mind comes in contact with mind, and from their aggregate

* . . . or, in philosophy, the assumption of an ideal man as a normal type, towards which we may conceive a perpetual tendency in the actual man of our experience. All these are *regulative* ideas.— *T. De Quincy*.

a national mind is formed, exhibiting an intelligence (to advert only to such of its functions as affect our present subject) which derives its knowledge of Value from the wisdom of the wisest, and is guided, in the pursuit of interest, to the most widely approved projects. So striking is this organization of public opinion, that Political-economists appear sometimes to have forgotten that it is entertained by individual human minds, acted on primarily by those natural laws which it is the province of Psychology to investigate. To the stages through which this state of maturity is reached, and to the numerous physical appliances by means of which its development is advanced, we can here only cursorily allude. The successive stages of civilization — the pastoral, the agricultural, the commercial, and the manufacturing — the rise and progress of governments, moral force prevailing over physical force, and opinions becoming more potent than laws, and duties more important than rights, until evolved from the conflicts of feudal systems, and corporate systems, and republics, and hierarchies, and military despotisms, there stands forth in two

distinct branches the great type of modern civilization, the governors and the governed, the Government and the People—these and similar investigations form the subject of that general science which statesmen have studied in all ages, and of which Political-economy is but a subsidiary department. With the physical appliances, by means of which, at this advanced stage of civilization, different classes of men become consentient and co-operative organs of one public mind, we are all familiarly acquainted. There is no need to say that the hundred tongues of Fame are now aided by the less poetical services of the Exchange, the Post-office, the Press, and the Electric Telegraph—that the waters on which alone commerce dwelt of old are now ploughed by steamboats in ever increasing numbers—that pathways and turnpike-roads are gradually superseded by Railways—and that innumerable other appliances now exist, by means of which a knowledge of the Prices of Commodities, and the current rate of Interest, is rapidly conveyed, and persons and Commodities are rapidly transferred from place to place in consequence of the informa-

tion communicated. It is enough to refer to the circumstance that, by the aid of art, the public mind is informed, and actions of the Community ensue, in a space of time which tends to be instantaneous in comparison with the term of national existence.

(39.) The Government and the People — the former conceived to be actuated by the most worthy motives, the latter million-headed and million-handed, yet conceived to be of one mind and to act as one man — constitute the field of operation for the modern Political-economist. In the advanced stage of civilization, to which our observations are here directed, each individual among the People acts, as has been very frequently remarked, instinctively for the good of all. The often-cited example of the corn-factor, who, regarding only his own interest, follows in pursuit of it precisely the same course that a disinterested public officer would pursue, is but a single instance of the operation of that law of Nature which generally causes each individual to promote, to a certain degree, the public weal, although occupied solely in the pursuit of his own advantage. Whilst, how-

ever, it is manifest that the effect of this benevolent provision of Nature is so important, that civilized societies could scarcely have grown up without the presiding influence of some such natural law, it must be remarked that the tendency of the present age is rather to overrate than to depreciate the scope of its design, and to look upon it as a permanent and independent, rather than as a provisional and ancillary, arrangement of Nature. Experience unhappily proves that in a civilized community the interest of highly influential individuals is not unfrequently *opposed* to the public interests. Bank and Railway speculations, sufficiently profitable to individuals, have in our times unnecessarily caused wide disaster — factories have been suddenly closed, leaving the owners with large fortunes, and their workpeople destitute — these and many similar occurrences incontestably prove that human art is now required to administer to the necessities of a fully developed organism. Nor does this conclusion militate against our experience of other natural provisions. Appetite is a wise provision for the support of the natural body, and sleepiness is a wise provi-

sion for its repose; but advanced reason teaches man to watch and to control his love of food and of sleep. The same advanced reason may warn the politicians of modern times to watch and to control the operations of individuals in pursuit of their own private interests. To stimulate the leaders of commerce in the production of real Wealth — to check their pursuit of undue or uncertain profit — to provide for the immediate communication of intelligence and the free exertion of enterprise — to watch that the Consumption of a people does not exceed its Production, that a reasonable proportion of Commodities is within the reach of the poorest citizen, that the rate of Accumulation advances with the increase of Population — the performance of these and of similar functions every People will now justly claim at the hands of its Government.


(40.) In order to perform these duties in a manner adequate to the importance of the subject, very little consideration will show that two classes, at least, of public functionaries must exist — a legislative class, and an executive class — each supplied with all the means that can be contrived to observe and to

control the movements of so vast a living organism as a civilized nation. With the former of these classes of functionaries we are all sufficiently acquainted in this country, under the title of Ministers and Members of Parliament; and the instruments of observation which they employ for the purposes of Political-economy, such as the CENSUS, THE RETURNS of the REGISTRAR-GENERAL, THE RETURNS of SAVINGS BANKS, TRADE RETURNS, EXCISE RETURNS, INCOME TAX RETURNS, REPORTS of SPECIAL COMMITTEES, and the like, and the operative measures which they frame, in order to compass the ends of Political-economy, being in fact such of our Laws as operate upon Wealth, and especially those which relate to the incidence of taxation, we have brought under our notice for frequent consideration. With respect to the latter of these classes of functionaries, it can scarcely be said that there exists, in this country, an executive department of Government constituted for the purposes of Political-economy, and of the means both of observation and of control which such a board of functionaries ought to employ, there is little popular knowledge.

Yet for such a class of functionaries there is evidently both opportunity and occasion. In the daily intelligence communicated by Government Despatches, and by Newspapers, there exists a ready means of observing each passing sentiment of the national mind, and in the power of publishing information, of giving warning, and of determining how large sums of money shall be employed in loans or otherwise, there is an ever present means of exerting influence to secure right action. Nor can it be doubted that the active control of such an executive power is now imperatively required.* Capitalists usually know their own interests, and their interests most frequently coincide with those of the State; but is this true of the new leaders of industry, associated Companies? Are shareholders tho-

* It is worthy of note that, as the wants of a free people are usually felt, and in some measure supplied from its own resources, before they have attracted the attention of Government, so the functions here designated have been for some time past exercised with general approbation by the Bank of England, however its administration may be deemed to have been swayed by private interests, or to have been impeded by the possession of an unrecognized and merely incidental power.

roughly acquainted with the nature of their undertakings? Are directors always wise, if always honest? And, if so, do they always evince that regard which a Government must entertain for the workpeople whose movements they direct, and whose destiny they often determine? So long as our working-classes continue to be the victims of the periodic diseases of Capital, speculation and panic, no argument can be required to prove that the interference of a controlling power is necessary on their behalf. Whether this power should be left in the hands of those who casually enjoy the confidence of our great capitalists, or whether it might not rather be intrusted to a Board of Public-economy, made directly responsible to Parliament, this is not the place to inquire: it is rather our business to consider the conclusions which such a power, however constituted, would naturally deduce from the evidence of surrounding circumstances, and the practical measures which it would adopt,—or in other words to determine what are the right interpretation, and the proper use, of changes of Value, in securing the advancement of national prosperity.



(41.) The class of instruments by means of which both this evidence must be procured, and these ends must be accomplished,—by which the changes of Value that occur must be exhibited, and the changes of Value that are desired must be produced,—may be designated as MONEY, if we understand this term to comprise all the numerous instruments of Exchange, whether coins of various denominations, or bank notes, and other securities that are based upon the principle of convertibility at will into a fixed amount of precious metal. The nature of the services which this class of instruments renders to Political-economy is sufficiently obvious: when discharging the functions which we have described, the Political-economist is to the State pretty much what the domestic-economist is to the household, but with this difference in their means of action, that whereas the latter can see, and hear, and command, in all that concerns his office, the former must use instruments of observation, employ ratiocination, adopt indirect or merely influential measures, and take such preliminary steps as are adapted to a subject of vast

dimensions and of perpetual mobility. We have seen that one great division, of fundamental importance if not indispensable in dealing with every subject of this character, is that which classifies subjects according as they involve, or do not involve, the consideration of *time*, and this division we have accordingly followed in tracing the natural principles of Value; it is very remarkable that Money, by an easy adaptation to the exigencies of advancing civilization, serves to measure both of these classes of phenomena—that whilst the Statical phenomena of Value are measured by Price, the Dynamical phenomena of Value are measured by the rate of Interest. It is quite obvious, however, that, whilst the same instrument is made use of, it is employed for different purposes, and must be handled differently, according as it is applied to one or to the other of these two classes of phenomena. These two uses of Money we shall therefore examine separately, devoting the former of the two succeeding Chapters to the consideration of the manner in which changes of Price both indicate, and cause, changes in the phenomena of Exchange, and the latter to the con-

sideration of the manner in which changes in the rate of Interest both indicate, and cause, changes in the phenomena of Production—the former subject being especially the field of action for the legislative measures, and the latter for the executive operations of Governments.

CHAP. II.

The Use of Money in the Statics of Political-economy.

—First, as a Means of Observation — Prices.—Secondly, as a Means of Interference—Taxation.

(42.) It is familiar to all that, imperceptible as the thoughts of other men are to the observer so long as their effects are limited to the mind within, when they cause external actions they can usually be decyphered without difficulty, and that on the other hand, intangible as the human mind is to the hand of the operator, emotions may be roused, and exertions may be stimulated through the intervention of external objects; in applying these general laws of mind to the subject before us, we have had occasion to enlarge upon the fact that the actions of Exchange mark the Value which men set upon objects, and that changes of Value cause changes of Production, of Distribution, and of Consumption. It must be sufficiently manifest that whenever the Political-economist is able to observe, and to control, the course of these actions, he can regu-

late the conditions of Valuable Commodities, and whenever he can observe and contrl the conditions of Valuable Commodities, he can regulate the course of these actions. We shall now proceed to examine how this fourfold power, of observing the rate of these actions, and of observing the Value of Commodities, of controlling the rate of these actions, and of controlling the Value of Commodities, can be exerted through the instrumentality of Money. It will follow from this examination, that to whatever hands is committed the duty of raising, and expending, the revenues of a State, in the same hands rest the means of regulating the whole subject-matter of its Political-economy.

The circumstance, that this fourfold purpose is answered by one and the same instrument, Money, whilst it facilitates their concrete expression, evidently adds in some measure to the difficulty of distinguishing the abstract principles of our subject. If one and the same instrument were to be employed to measure, and to cause, both pressure and moving force, it would be far more difficult than it now is to keep distinct in the mind the processes of observation, and of action, that are applied to

the Statical, and to the Dynamical, Phenomena of Mechanics; a difficulty of the same kind arises in Political-economy from the promiscuous use of the single instrument, Money. It is, however, on this account, only the more requisite to keep distinct in the mind, from their fountain head, those two classes of phenomena to which we have so often had occasion to refer, as distinguished by the presence, or the absence, of the element time—the phenomena of Ideas and of Emotions, of rest and of continuous action, of order and of progress, resulting in the phenomena which constitute the level and the velocity of the stream of industry, or the phenomena of Exchange and the phenomena of Production.

(43.) To commence with those phenomena in which the consideration of time is not involved, it is evident that if but two individuals, possessed of different Commodities, were to meet for the purpose of barter, an observer might immediately become aware of the amount of Value jointly attached by them to each Commodity, and might thus be able to express this amount in terms of every other of the Commodities given and taken in ex-

change; or if one of such individuals were to pay the other in Commodities for different kinds of Labour, the observer might express the Value attached to each kind of Labour in terms of some sorts of Commodities. In order to be able to compare all these different amounts, it would obviously be necessary that the observer should employ, as a common measure, some *one* Commodity, bearing a known relation in point of Value to each of the others; but if it could be supposed possible that the traffickers would consent to exchange on every occasion one and the same Commodity for the other Commodities, such a common measure would be at once obtained. The observer would then possess a material instrument, capable of being divided into units of space or weight, and therefore indicating accurately, based on the principle of self-interest, and therefore indicating with certainty the average* of the degrees of Value

* It will be remarked that the degrees of Value thus indicated would not exactly coincide with the conception entertained by either of the parties to the Exchanges, but would represent the medium of the amounts of Value attached by them severally to the Commodities; if it were

attached by the barterers to every other Commodity. This imaginary case is but a type of all the exchanges of civilized life. However inconvenient it might appear to be, that two exchanges should be made where one would suffice; that instead of directly bartering his goods, the seller should part with them in one place for the medium of Exchange, which he must carry to another place, in order to procure what he wishes to purchase; yet this practice, it is needless to say, has secured universal adoption, in consequence of the important advantages that are found to be attached to it; and the one Commodity thus universally exchanged is Money. The possessor of Money may command whatever it is worth, in all the variety of quantity and of quality that he desires; and if he does not wish to exchange the whole sum, he can carry away any portion of it because it is portable, and preserve it because it is durable. There are

otherwise, neither of the exchangers would have any inducement to exchange, their only reason for exchanging being, that they mentally attach different degrees of Value to each Commodity. The amount of Value therefore which would be thus indicated is precisely that average amount which we require to be informed of when dealing, not with an individual, but with a community.

also advantages arising from the use of Money which accrue to the whole Community, and in which, therefore, every member participates. Wherever Money is used the language of Money is used, the existing state of the markets becomes known, and is accurately expressed, the buyers and the sellers of every Commodity become tacitly aware of each other's presence, and the Price of the Commodity is insensibly fixed, by the competition of all, at that exact amount which indicates the degree of Value mentally attached to it by the Community. In the monetary systems which, in consequence of these advantages, are established in every civilized country, the Political-economist gladly recognizes instruments of observation admirably adapted for his purpose, being protected by their vast size from ordinary disturbances, whilst capable of measuring the largest and the smallest amounts of Value.

But Money not only serves to measure the Statical Phenomena of Political-economy; it also serves to operate upon them. If, by the ordinance of a superior power, any kind of Property becomes charged with the payment of a

certain sum of Money, the Value attached to it is diminished in that degree ; if the possessors desire to exchange it, they find that purchasers are aware that there is a burden laid upon it, and they obtain a less Price than before, whilst they who retain it, retain it with its burden, and sink, in consequence, in monetary position. Such are the effects which it is in the power of every Government to cause by means of fiscal enactments, or rather, such is the power which every Government must necessarily exercise whilst raising taxes ; it is much to be regretted that this power has been more frequently employed to reap the solid fruits of civil victories than to maintain the true conditions of social prosperity, and that the existence and the misuse of this power are unhappily blended in every page of Fiscal History. It may be further observed that this power is vested to a certain degree in all who possess Money, and use it. All who purchase for the purpose of consuming or retaining, manifestly diminish so far the quantity of the Commodity existing in the market, and enhance its Value or enrich its possessors, — whether these political effects of

the action of purchasing be or be not contemplated, such must be the inevitable consequences of the action.

(44.) Having thus briefly considered what Money *is* with respect to Statical phenomena, as a means of observation and as a means of active interference, let us now ask how it ought to be employed in both these capacities.

As an instrument of observation it is quite evident that Money, however admirably adapted to express the Value set upon Commodities by public opinion, is not always an exponent of the opinion which *ought* to be so formed. The Price of Commodities may be trusted to as a true indication of their proper Value, only when dealers can command every kind of information, and know how to make use of it. With respect to old and well established trades, the ability of private individuals to learn and to apply their knowledge, is very frequently superior to that of any Government; but with respect to new enterprises this is far from being true, and it is evident that in these cases the superior means of information at the disposal of Government might advantageously be applied to aid the knowledge of

private individuals. It is scarcely necessary to observe that, whilst Governments should anxiously interfere to remedy these defects in the indications of money, every step should be taken to prevent the necessity for such interference, by encouraging the most rapid and the most certain communication of intelligence through private channels, and by furnishing, to all who are to be concerned with industrial operations, the means of securing an appropriate *industrial* education.

When we regard Money, not as an instrument for observing, but as an instrument in the hands of the Legislature for controlling the Statical conditions of Industrial Life, and reflect that the incidence of taxation renders whole classes rich or poor, determines the physical happiness or misery of numerous families, and affects powerfully the moral condition of the people, and more remotely the security of the State, we cannot but pause and consider how great is the power, and how high the responsibility of those by whose counsels fiscal operations are directed. The mere Political-economist may well be congratulated that the determination of the *ultimate*

ends to be aimed at in directing the incidence of Taxation are not, as we have before intimated, a part of his functions, that whilst it is his object to determine the means which will conduce to the accomplishment of certain purposes, it is the part of a higher functionary—the professed Statesman—to point out what those purposes are. What position of the various classes of society is required for the ends of civil government—in what proportion the clergy, the aristocracy, the middle classes, the proletaires, ought to be endowed with Wealth—how the conflicting interests of land-owners, merchants, and manufacturers, ought to be regarded—how far young and weakly organs of industry can be fostered without exciting jealousy, or offending abstract notions of justice—these and similar conclusions form the principles of Cabinets, in conformity with which the Political-economist who supports them must devise his measures; they determine what the conditions of Society ought to be, *he* devises financial measures calculated to maintain or to produce those conditions; they are as the body of directors, *he* as the engineer of this special branch of Politics. It is evident,

however, that there are some purposes to be answered in the imposition of taxes, which are less a matter of party politics, than of moral feeling. Certain practices are carried on in civilized societies, and some habits are formed which it is inexpedient or impossible to prohibit by law, but which every virtuous Statesman would wish to discountenance,—such are the practices of drinking ardent spirits, of gambling, and others, which, however innocent in themselves, cease to be so when carried to excess. By imposing a tax on practices of this description two moral ends are accomplished,—the practices are in some degree prevented, and they who persist incur a pecuniary penalty proportionate to the degree of their dereliction of morals, or of their excesses. In providing therefore for the exigencies of the state the practical Political-economist must in this case also be guided by dictates of a higher nature than any which he can learn from this science, not however furnished, in this instance, by politicians his superiors in station, but suggested by his own aspirations for morality and virtue.

(45.) To effect these two several purposes —

the adjustment of the ranks of society, and the prevention of undesirable practices—two several instrumental agencies may be employed by Statical Political-economy, well known to those who are familiar with the machinery of Fiscal Legislation, by the terms Direct, and Indirect, Taxes.* A time will possibly arrive when the whole object of Taxation will be simply to raise Money, or when the condition of society will so nearly approach to perfection that it will not be necessary to keep in view any purely political object, nor to aim at any purpose of moral improvement, whilst determining the incidence of Taxation; but these things are clearly not yet. A great disproportion of classes exists in every country; undesirable habits and practices are

* It is evident how each of these classes of taxes produces the effects here indicated; the former, as in the case of the Income Tax, and of the Assessed Taxes, being paid directly by those who possess the Income, or who consume the Commodity taxed, depresses their position by reducing their Income, or by enhancing the cost of the Commodity; the latter, as in the case of the Customs and the Excise, although gathered from intermediate agents, is paid ultimately by the consumer, and affords consequently the means of checking to any extent the Consumption of the Commodity taxed.

everywhere visible; both evils alike may be traced to what may be not so fitly called imperfect Distribution, as the imperfect direction of Production. To foster the arts and encourage genius, to give honour a local habitation, and principle a sanctuary, there must necessarily exist, in every country, a class composed of an adequate number of persons exempt from the corrosions of care, and from the materializing influence of toil; but a vast aggregate of independent fortunes can scarcely be necessary or useful for this end, nor can it be for services rendered to the State by numberless proprietors that a large section of labourers are constantly employed in producing Secondary Commodities, and that consequently Primary Commodities are always deficient in quantity, and miserable cottages, and undrained alleys, want of food and of fuel, overwork and underpay, raise their voices against our civilization. Yet it is certainly not beyond the power of Taxation to raise the condition of the poorer classes, and that probably without subtracting from the real welfare of the rich. If, for example, a Legislature were to be sufficiently independent of

private considerations to enact that, in the case of proprietors dying without leaving near relations, a considerable share of their property should revert to the funds of the State, these lamentable evils might cease, and it is not impossible that if moral inducements were judiciously offered, the State might once more be regarded as *parens patriæ*, and its revenues might eventually be augmented by the voluntary legacies of numerous testators. Again, gin-palaces, divans, and shops dedicated to the consumption of stimulants injurious alike to the physical and the mental energies of the consumers, can scarcely be regarded as fitting substitutes for convenient dwellings, wholesome food, good education; yet a judicious tax avowedly designed for moral ends, if it could be imposed, would powerfully divert Labour from the Production of the former to the Production of the latter class of Commodities. While these things continue it is clear that no taxes can be wisely imposed for *merely fiscal* ends, although it must be avowed that the present state of political knowledge affords little hope

that any other ends will receive their due consideration, until the time shall have elapsed that is necessary to imbue public opinion with the spirit of truths such as those which have occupied our attention.

CHAP. III.

The Use of Money in the Dynamics of Political-economy.

— First, as a Means of Observation.— The current Rate of Interest.— Secondly, as a Means of Interference.— Determination of the Rate of Discount.

(46.) HAVING considered the use of Money, in the hands of the Legislature, as a means both of observing and of rectifying the Statical conditions of national Industry, we have now to consider the Dynamical use of Money in the hands of the Executive, as a means both of observing and of controlling the rate of industrial movements. This latter class of phenomena, it will be remembered, we distinguished by the circumstance that in them is involved the consideration of time.

As Value is attached to the possession of Property, a proportion of that Value is naturally attached to the temporary use of Property, whenever it is in its nature durable. Of some perishable Commodities the whole Value may be confined to one single occasion

of utility, and to speak of using such objects temporarily would therefore be absurd; it would be ridiculous, for instance, to speak of lending such Commodities as food or fuel for the purpose of being used and returned. But as these objects have a Value, notwithstanding they are used but once, so enduring objects may be said to have several temporary Values, as many in number as the several successive occasions on which they are capable of being used; thus, a house, a ship, a carriage, may be let out for hire on several successive occasions, the Value of their use on each occasion being considered to form integral parts of their entire Value. Moreover, whilst it is thus the nature of some objects to render their services throughout a length of time, it is also the nature of many others to increase and multiply: *in time* vegetation grows — by the active powers of nature, the bare rock becomes covered with mosses and lichens, and constitutes a foundation for the tribes of ferns, which again form beds for the meadow and cereal grasses; *in time*, animal life is multiplied — the wild bees swarm, the birds lay their eggs, the fishes deposit their spawn, and the steppes

and the prairies become peopled with wild cattle and horses; *in time*, men labour, and accumulate the fruits of their labour, and enclosed fields and elaborated roads, furnished houses and orderly cities, become permanent features of a civilized country. The use for a time, therefore, of most articles of property must always have had its usufruct, or partitioned Value. We may feel assured that in every country, as soon as the Exchange of articles of equal Value came to be practised (if, indeed, it were not naturally prior and ancillary to the operations of Exchange), the act of lending for a valuable consideration, or of parting with the temporary use for hire, would also be performed; and since in the great majority of cases Commodities would be so let on account of their availability to assist human Labour, or of their natural powers of Production, it is evident that the amount of hire would be principally determined by their instrumentality in realizing Products, — however the amount might be influenced by other causes, we may feel certain that if the object hired produced much fruit, the owner would receive much; if less, he

would receive a less amount. When Money becomes the general representative of all objects of Value, and *is itself hired for Money*, the amount paid, or the rate of Interest, is still principally determined by the availability of the objects* (which the Money lent principally represents) to aid the purposes of Production. The rate of the Interest of Money thus becomes a natural exponent of the productive power of Industry, or furnishes, when allowance is made for the influence of disturbing causes, a faithful index to the rate of Production.

But Money not only supplies a natural measure of the rate of industrial operations, it also supplies the means of controlling them, to those who have large sums at their disposal. In consequence of the practice of lending, there exist in all civilized countries a certain number amongst the most active and enterprising of the leaders of industry†, whose

* The old arguments against usury, "that it is against nature for Money to beget Money," and the like, were founded at once on the perception of this principle, and on ignorance of the real functions of Money.

† It is certain that the greatest part of trade is driven by young merchants upon borrowing at interest.—*Bacon*.

operations are always in a great degree, and are often entirely, dependent on the terms on which they can obtain loans of Money; if Money is lent at a low rate of Interest, old operations are pushed forward, new and often hazardous enterprises are commenced, and the industrial world glows with lively and sometimes with superabundant energy; if Money can be procured only at a high rate of Interest some works cease to be remunerative, and are abandoned, speculative projects are discontinued, and operatives find it difficult or even impossible to obtain employment. From the one excess there ensue feverish excitement and sudden collapse, from the other, gradual want of circulation and inanition of the extremities of society; and to produce these evils, or to ward them off, is therefore in the power of those who can command large sums of Money. The healthy progress of Industry thus depends very much on those who have the power to lend for higher objects than mere gain, or who can stipulate for or refuse a certain rate of Interest principally, or solely, for the purpose of securing the public welfare, — in other words, the rate at which the wheel

revolves can be regulated by those who have the power to regulate the supplies. This power, if it be not already possessed, might evidently be secured without difficulty by the executive branch of every Government. In the case of many States there are already in the Exchequer large sums invested in floating securities, or the revenues of the State are partly derived from Crown Lands which might be converted into Money, and be used under proper control for the purposes here indicated, and how much better be used for purposes avowedly the functions of the Statesman, than for carrying on the business of the farmer, the planter, or the timber merchant, with necessary abuses and probable loss. If a Board of Public Economy were to be entrusted with the administration of these funds, and loans were to be issued after each month's interval at such rates of Interest as *public policy* might indicate, the cost to the State would probably be trifling, whilst the ebb and flow of speculation and panic would certainly subside in the stream of regular enterprise.

These two functions of Money as a means of indicating, and as a means of controlling,

industrial movement, may require a little closer examination.

(47.) When the rate of Interest is used as a measure to indicate the rate of Production, this, like nearly all measures, when observed attentively, is found to be subject to disturbing causes, the effect of which must be apprehended and allowed for before its indications can be received as expressions of the truth. Of these disturbances the most striking are comprised in two classes—those which are caused by variations in the credit of borrowers, and especially in the credit of the States which have public debts—and those which are caused by variations in the quantity of Money required to be borrowed in comparison with the quantity offered to be lent. These two classes of events may be said to constitute the characteristics of what is familiarly called the Money Market, or the incidents of the Dynamical functions of Money, as distinguished from those of Prices current, the incidents of its Statical functions.*

* This description would be more strictly correct were the practice of exchanging, or dealing in, debts, still prohibited by Law. Stocks and funds have now their

Of the variations of Value caused by the variations of these two factors, Credit and Quantity, we have already spoken at sufficient length. Credit—*the confidence in the future* of Psychology—the buoyant element on which float the adventures of Industry—obviously enters into the Value of all loans. Changes of Quantity exercise an influence on loans, as on every other Commodity, in consequence of which their Value varies inversely as, but in a greater degree than, their abundance or scarcity. The influence of each of these disturbing causes on the Value of public securities, as indicated by its general representative Money, is too familiarly understood to require illustration.

When the effect of these, and of other lesser disturbing forces, has been calculated on and allowed for, Money is found to afford an index to the rate of industrial movement, founded on laws of nature, and exhibiting their operation in numerical language. Let us consider what information may be derived from the

prices. It is obvious, however, that in this case the Statical use of Money is only ancillary to its Dynamical use.

use of a measure thus constituted and endowed.

As the income of an individual serves popularly to denote his fortune, so the income of a nation (provided it be happily distributed) serves to mark its economical position amongst nations. Income evidently depends on two conditions—on the amount of Capital, and on its rate of Production; or, if we advert to our Statical and Dynamical measures, on the sum of Money possessed, and on the rate of Interest which that Money bears. If, therefore, the amount of Capital be known, a knowledge of the ordinary rate of Interest will enable us to determine the economical status of each nation. Again, as the progress of an individual in becoming rich depends on the difference between his income and his expenditure, the progress of the Wealth of Nations depends on the difference between their rate of Production and their rate of Consumption. Thus, the rates of Accumulation of two nations may be compared by comparing the differences between the rates of Interest that Money usually bears, and the rates of expenditure usually made; when with this is com-

pared the increase and the decrease of population, an exact measure is obtained of what Political-economy regards as the progress of a Nation.

These and similar conclusions depend on those abstract principles of Physiology and of Psychology to which the first part of our inquiries was directed. When we found that Value is not only a Conception, but that it bears also an Emotive character, that not only are Ideas of equivalence contemplated, but that when an overplus of Value exists, Emotive desires are entertained, causing actions of an enduring nature, and we concluded that this is undoubtedly the source of that power which sets Industry in motion, we argued that the effect thus produced might be used as a measure of its cause, or that the rate of industrial movement might be used as a Dynamical measure of Value, if this rate should ever be correctly observed, and accurately denoted. That such a measure is needful, that there is occasion to employ both a Statical and a Dynamical measure of Value, is sufficiently manifest. Whilst of those changes of Value to the measurement of which Price can be applied, it furnishes an

index alike faithful and exact, to those more abstract phenomena which test the resources of a *science*, it is obviously inapplicable; when, for example, it is sought to determine how much Value is attached at different periods of time to different Valuable Commodities by an individual living in solitude, by a nation at peace and at war, by the nations of antiquity and of modern times, or by the whole human race at different epochs, it is obvious that a system of measurement founded on the action of exchanging, will be found inapplicable or insufficient. To phenomena of this character a measure of Value must be applied founded on other principles, which, as they involve higher and more abstract truths, cannot be witnessed in undisturbed operation among the ordinary events of social life. Such a measure of the Value attached to objects is afforded by its *tendency to accelerate or to retard the rate of their Production*. Whatever difficulties may be found to intervene in the application of the rate of Interest as an exponent of this measure, it will be remembered, that to a progressive science it is of the chief importance that its principles should be, not so

much practically applicable, as fundamentally correct. It will be borne in mind that although this phenomenon has been frequently employed in practice as a *sign* of the changes of Value, it is now for the first time demonstrated to be a measure founded on strictly philosophical principles; and that the same instrument may be expected to render very different services, when elaborated and applied to a specific purpose, from those which it has rendered when used without skill, and almost without design. If we recognize a certain process of observation as distinctly applicable to a certain class of phenomena, we can without hesitation exempt other phenomena from that process, we can confidently apply it to the phenomena to which it is applicable, we can collect significant facts, and, what is scarcely of less importance, we can communicate our observations to others in language which cannot be misunderstood; such are the results which may be reasonably anticipated from the employment of this Dynamical measure of Value by the scientific Political-economist.

(48.) To the less abstract, and more interest;

ing, consideration of the Dynamical use of the rate of Interest, not as an instrument of observation, but as a means of active interference; the same observations will in a great measure apply. Knowledge must be gained by experience, and when an instrument has been almost untried, it is difficult to argue the full effects of its employment; yet some intimation respecting the nature of these effects may be gathered from a philosophical examination of the abstract principles on which it depends, and from experience of the effects which have been produced whenever this instrument has been used. The most sensitive of all the affections in the mind of man, and especially of industrial man, is the anticipation of the future; as it is usually involved in obscure uncertainty, a hint from a superior power will on most occasions serve to darken or illumine it; and when many minds are brought in contact with the never-failing consequence of additional excitement, and especially when legalized partnership engenders an *esprit de corps*, often forgetful alike of moral and of prudential considerations, a very slight impulse from without will serve either to fan

enterprize, or to damp the ardent excitement of speculation. Were a Board of Public Economy to be established, for the purpose of debating publicly on the Dynamical condition of Industry, and of fixing by its decisions the rate of Interest at which loans should be granted, it is difficult to conceive how great might be its influence in directing to right conclusions a public opinion constituted like that of England. Small facilities afforded, or small difficulties interposed, at the right time and in the proper direction, might prevent on the one hand the overwork of the labouring classes, ever accompanied by the exhaustion of their best energies, and frequently by the pollution and the annihilation of their better nature, and on the other hand that stagnation of trade which is the dead sea of the workman's existence, and the fruitful mother of such social pests as combinations, and strikes, and lock-outs — the cankerworms of Productive Industry. A real remedy for such evils as these should be cast aside for no light* ob-

* It can be scarcely necessary to repeat that no considerations are here adverted to, save those which enter into the province of Political-economy.

jections. "It is not the rapid increase of national wealth or income which sovereign authority ought to have in view, but its stability and equality; for the duration of an invariable proportion between population and income is always attended by general well-being, whilst whenever they are subject to variable chances, the unexpected opulence of some cannot be considered as a compensation for the ruin and miserable death of others."*

(49.) Thus it is that Money, both in the Statics and in the Dynamics of Political-economy, affords a means of observation, and a means of intervention — that Prices, and rates of Interest, expressed in Pounds and Shillings and Pence, constitute both the dial and the graduated wheel through which we are to observe, and to operate — or, that our instruments, although acting on and through the principles of human nature, are found to consist of metallic indices, related as parts, and multiples, and not less capable of being made subservient to the processes of exact calculation than are the instruments of any purely physical art. The results of these

* Sismondi.

principles, when observed, may thus be expressed in figures ; as may also be the anticipated results of their future operation, or such relations as those of Quantity and Value, Value and Rate of Production may be exhibited in the formulæ, and analyzed by the different methods of Algebra and of Fluxions. It is not to be supposed that the scientific student of Political-economy will fail to apply these methods in order to elucidate the abstract principles of this branch of philosophy, to employ figures in order to tabulate facts, and to assume hypothetical laws in order to indicate the points to which the future course of observation ought to be directed. When we have learnt that certain forms of matter cause certain mental phenomena, and that these mental phenomena cause certain actions, which again produce definite effects upon forms of matter, and when we have recognized in these successive causes and effects, the principles which lie at the root of all the phenomena of Political-economy, we have indeed acquired a knowledge of principles which may be graced with the title of Laws of Nature, in the widest signification of that term, but

we are still far distant from that knowledge of *numerical* Laws which is the characteristic of the higher branches of Science, that have succeeded not only in breaking up complex phenomena into their constituent parts, but also in ascribing to each of these parts its exact proportion of influence in kind and in degree. This is the field which now claims the attention, and will hereafter produce the laurels of the scientific Political-economist. It is only by numerical exposition that truths can be placed beyond the reach of controversy, and although the art of Political-economy must always be exercised by many who have not the opportunity to enter into and to appreciate abstract calculation, yet these will always be found ready to follow the philosopher who, by common consent, has applied the most searching analysis to the examination of natural phenomena, and has written in the most lucid terms the true exposition of natural principles.

CHAP. IV.

CONCLUSION.

IN concluding our examination of this branch of abstract Political-economy, it may be convenient to consider, in the most general manner, how the principles, with which we have been engaged, ought to be applied to effectuate the purposes of the Art. We shall, therefore, suppose the case of a Political-economist, in possession of the means of improving the social condition of mankind, and desirous to learn the right method of applying those means—selecting the Country on which he has the power of operating as the field of his operations, and inquiring by what specific measures, as, for instance, by devising and promoting what Acts of Parliament, by giving what votes, by writing what essays, by making what speeches, or by what other mode of exerting his influence, he can promote the happiest

Production, Distribution, and Consumption of
Wealth in this country.

When thus regarding men as composing one single political body, and viewing a nation as a whole, the consideration to which the Political-economist would direct his attention first, is that at which, in analyzing its parts, and tracing its elementary principles, we naturally arrived last, viz., the consideration of the present *rate* of Industrial and Economical Operations as compared with their rate in past times, and in reference to existing circumstances,—to borrow the language of sanatory art, he would, in the first instance, *feel the pulse* of his patient. If for this purpose he were to select any fixed period, as, for instance, a month, to constitute an unit of time for the measurement of the Dynamical Phenomena of Political-economy, his first object would be to discover what the rate of Industrial and Economical Action had been during the past month; and should it appear to have been disturbed by extraneous circumstances, it would then be his object to discover whether during this time any exceptional phenomena had occurred among the elements of Public

Opinion, having a tendency to affect the usual course of such Action. Had, for instance, any degree of undue confidence in the future been evinced, had there been any speculative mania, or any groundless panic, the effect of such abnormal conditions of Industry would be ascertained and allowed for before it would be attempted to determine the rate of action due to its purely normal conditions. Having noted the amount, if any, of such undue excitement or depression of Public Opinion, the Political-economist would endeavour to ascertain the rate of Industrial and Economical Action throughout the body politic, in all those parts, and with reference to all those relations which he has learnt to distinguish by a study of Nature. Thus dividing, in the first place, the innumerable instances in which the action and the reaction of Human Nature and of Valuable Commodities occur into two groups, known as Production and Consumption, and distinguished by the circumstances that in Production the effects of man on matter are predominant, and in Consumption the effects of matter on man, he would proceed to determine the rates at which these effects

have respectively been evinced during the time specified.

Commencing with Production, and considering, in the first instance, the effect of its operations in imparting Value to Commodities, for the purpose of discovering the rate at which these processes had been carried on he would be careful to ascertain the average rate of the Interest of money during the current period, and after having determined the influence, if any, of disturbing causes, he would proceed to affix to this phenomenon its proper interpretation. Considering, secondly, the effect of these operations on the producer, and examining the counteracting medium of toilsome sensation *through which* the course of Production had proceeded at this rate, he would ascertain the number of hours of work that had prevailed at the seats of Industry during the same period. After comparing these quantities with those that had usually occurred, he would be prepared to mark the character of the period in question as regards the rate of Industrial Action, in reference both to man and to matter, as being equal to, or in

a definite degree greater or less than the average rate.

Proceeding to consider the rate of Consumption during the time in question, and examining, in the first instance, the effects of matter on man evinced in this class of operations, the Political-economist would attempt to ascertain how the moral and physical energies of the people had been sustained, or in what degree the health and strength and satisfaction of every class of the population had been affected by the abundance, or the scarcity, of Commodities, during the period in question. He would then examine the effect of man on matter caused by this class of actions, and inquire how large an amount of Commodities had been consumed by the Nation, whether in the immediate satisfaction of human tastes and wants, or in works of reproduction.

A comparison of the rate of Consumption with the rate of Production would naturally indicate the rate of Accumulation—a phenomenon which the Political-economist would always be careful to compare with the rate of the growth of the Population.

Having thus examined the present state of what may be called the vital action of the Nation, and having determined how far its rate has been due to usual and how far to exceptional causes, the Political-economist would now proceed to consider the more permanent conditions of National Health and Wealth—to refer to the test which we have so frequently employed, from the consideration of phenomena in which time is involved, he would proceed to those in which time is not involved; from rates of movement ever fleeting, and frequently changing, he would proceed to the less difficult consideration of the lasting qualities and quantities which make up the more permanent conditions of national prosperity. Reflecting that, when viewed in this aspect, the subject of his inquiries admits of being more fully analyzed, and bearing in mind that it exhibits the relations of two great co-ordinate branches—Human Nature and Valuable Commodities—he would endeavour to arrange the constituent parts of each of these great branches, in classes distinguished by the principles which he has learned from Natural Philosophy.

Thus commencing with the consideration of

the more permanent conditions of Labour, and examining, in the first place, those effects which, by means of its performance, are wrought by man upon external objects, the Political-economist, having classified the qualities of man which are adapted by Nature to impart Value to Commodities under two heads, as Physical and Mental, would endeavour to ascertain, with respect to the Nation whose condition he is engaged in considering, how large an amount of the population applies its energies to the purposes of Production in each of the modes thus indicated. If, having reference to the natural capacities of the Nation, to the physical conditions under which it is placed, and to the present stage of civilization, he should find that work is well distributed, in kind and in degree, he would hail with pleasure a rare example of fortuitous excellence; should he, on the other hand, discern an inequality in the distribution of work, should he find, for example, that any who are capable of applying Mental Labour to the purposes of Production are misplaced—that men of cultivated intellect cannot find em-

ployment, whilst the mining and the manufacturing population are unable to perform, without undue exertion, the work required of them by the weight of a national debt, and by the heat of foreign competitors—he would have to consider by what fiscal regulations, or by what application of honorary distinctions, the energies of the industrial population might be more happily distributed. If he should feel disposed to prosecute further the work of classifying the operations of National Industry, with a view to their amelioration, we have seen how this object may be prosecuted by selecting, as marks of the lines of conduct which they guide, certain definite principles of the human mind, such as Memory, Judgment, Perception of Similitudes, and Analogy, and by making use of them to divide the industrial population into those classes which are endowed by Nature with such qualifications as ensure the most successful pursuit of definite industrial avocations. It would be no ungrateful or barren theme to speculate on the results which might be caused by putting the right men in the right places, or by re-

moving such among the leaders of Industry as are without the higher powers of the mind to a sphere of useful activity, and placing among their foremost ranks many a latent genius, now occupied in the constant repetition of some purely mechanical process.

Considering, in the second place, those effects which, in the performance of Labour, are produced through the sensations on the physical, intellectual, and moral health of the industrial population, the Political-economist would have to resolve by what amount of time devoted to Labour such of these effects would result as are most to be desired or are least to be deplored, remembering that work is made for man, and not man for work. Comparing the durations of time, thus approved of as best for Mental and Physical Labour respectively, with the hours which are devoted to work by the classes employed in each kind of Labour throughout the country under consideration, he would see how far they differed or agreed, and in the former case would reflect how this difference might be made less, whether through the effect of compulsory enactments, through

the pressure of taxation, or through the influence of high and conspicuous examples.

Proceeding to consider, in the next place, the conditions under which Commodities are habitually consumed, and taking first that part of this inquiry which consists of the effects of matter upon man, the Political-economist, having tested these objects by their adaptation to certain definite parts of the human frame, and having classed them accordingly under two heads, as Primary and Secondary, would endeavour to determine, approximately, how large an amount of each of these classes of Commodities affords satisfaction to the wants, or gratifies the senses, of each of the classes of the People under his consideration. It would be borne in mind that the Distribution of Valuable Commodities is that condition and consequence of healthy economical action which, like the circulation of the blood in the Animal Kingdom, conveys nourishment to the parts where it is wanted, and causes that due appropriation without which any amount of supply conduces little to national strength. Having previously observed the *rate* at which Commodities are at present consumed, the ob-

server would now determine *how* these Commodities are habitually consumed. Does every member of the community sufficiently participate in the benefits that are centred in Primary Commodities? Is the share accruing to each individual compatible with the peculiar circumstances in which he has been placed by the advanced tide of civilization?—is a sufficient allowance made for the influence of a polluted atmosphere? of crowded dwellings? of uniformity of employment?—if a sufficient quantity is distributed to each, what security is felt that it will so continue in future times?—if Primary Commodities are adequately distributed, what amount of Secondary Commodities reaches each individual, reference being had to the quantity consumed by the whole community, and to the state of manufactures and of commerce in the ages in which we live?—or, in other words, what is the annual Value of each kind of the Commodities consumed by each class of the population?—what is the highest and the lowest amount?—how far in the case of each class of the population is the amount of Income received greater than the

amount of expenditure?—what guarantee does this difference afford against future contingencies?—and, finally, how can these amounts be so expressed as to afford the most accurate idea of the manner in which Valuable Commodities are circulated, and become conducive to the lasting health and happiness of every member of the body politic, however remote from the centres of Wealth?

Examining, ultimately, the effect of man upon matter, as constituting part of the conditions under which Commodities are habitually consumed, the Political-economist would advert to many of those circumstances which are witnessed in detail among the daily incidents of domestic life. What is the Value of the food, and clothing, consumed by the large section of the male population employed in domestic occupations? What is the Value of the grain consumed by animals, that are kept or killed for the purposes of luxury? What Value ought to be set upon the prodigious quantities of animal manure, which are poured into our rivers as a sacrifice to health and cleanliness? Are these objects

rightly so disposed of in the quantities thus indicated, and if not, what measures ought to be employed, wholly or partially to change their destination ? Such is the nature of the questions which would arise from the consideration of this branch of the phenomena of Consumption.

Finally, the conclusions arrived at after the separate observation of Statistical Phenomena in each of these definite classes, and the various means of improvement suggested by their separate examination, the Political-economist would be careful to compare, and to arrange according to their relative degrees of importance, in order to found upon them remedial measures, specifically adapted for the removal of every obstacle to the happiest Production, Distribution, and Consumption of Wealth, and for the improvement of every defective condition of Industry. Thus might he be enabled to quit the domain of natural Political-economy with a compact and assorted body of measures, prepared either to be incorporated with the general code of Political Principles entertained by himself, or, should

he chance to be a member of Government, to be submitted to the arbitrament of those higher functionaries whose general policy he would be prepared to follow.

THE END.

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